



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 3

[List View](#)
General Information | [Contact](#) | [Default Values](#) | [Discount](#) | [Document Information](#) | [Clarification Request](#)
Procurement Folder: 882993

SO Doc Code: CRFQ

Procurement Type: Central Master Agreement

SO Dept: 0805

Vendor ID:
SO Doc ID: PTR2100000011

Legal Name: SONNY MERRYMAN INC

Published Date: 6/4/21

Alias/DBA:
Close Date: 6/30/21

Total Bid: \$0.00

Close Time: 13:30

Response Date:
Status: Closed

Response Time:
Solicitation Description:
Responded By User ID:
Total of Header Attachments: 3

First Name:
Total of All Attachments: 3

Last Name:
Email:
Phone:



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

State of West Virginia
Solicitation Response

Proc Folder: 882993
Solicitation Description: Addendum No. 1 - Mid-Size Medium Duty Vehicles
Proc Type: Central Master Agreement

Solicitation Closes	Solicitation Response	Version
2021-06-30 13:30	SR 0805 ESR06292100000008492	1

VENDOR
000000197591
SONNY MERRYMAN INC

Solicitation Number: CRFQ 0805 PTR2100000011
Total Bid: 0
Response Date: 2021-06-30
Response Time: 10:54:20
Comments:

FOR INFORMATION CONTACT THE BUYER
Toby L Welch
(304) 558-8802
toby.l.welch@wv.gov

Vendor
Signature X **FEIN#** **DATE**

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



June 30, 2021

Toby Welch
2019 Washington Street, East
Charleston, WV. 25305

To whom it may concern:

Sonny Merryman, Inc. is pleased to offer the following proposal in response to PTR2100000011 for Mid-Size Medium Duty Vehicles. We are offering the Startrans Bus P2/2 Freightliner. The vehicle offered meets the specifications outlined. Sonny Merryman Inc. agrees to be bound by the proposal without modifications, unless mutually agreed to upon further negotiations between The West Virginia Division of Public Transit, and Sonny Merryman, Inc. This proposal is valid for (150) calendar days.

Startrans Bus is a well-established, Forest River supported supplier in the industry, manufacturing quality American made products. Sonny Merryman, Inc. is a Virginia incorporated business and has provided quality sales and service to institutions and Governmental agencies since 1967. We look forward to a successful partnership on this procurement.

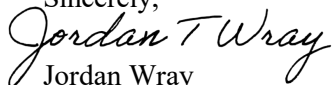
Sonny Merryman, Inc. is well accustomed to supplying equipment to recipients of federal, state and local funds and will make all required documents available to you throughout the life of the contract.

Principal point of contact:

Jordan T. Wray
Sonny Merryman, Inc.
5120 Wards Road
Evington, VA 24550

(Office) 434-485-8905
(Fax) 434-821-8203
jordan@sonnymerryman.com

Thank you for this opportunity and please call if you have questions.

Sincerely,

Jordan Wray
Commercial Sales Manager
Sonny Merryman, Inc.



The Allison Promise

Provide the most reliable and
valued propulsion solutions in
the world to enable our customers
to work more efficiently.

Quality

Customer Focus

Integrity

Innovation

Teamwork



REGIONAL & COACH APPLICATIONS

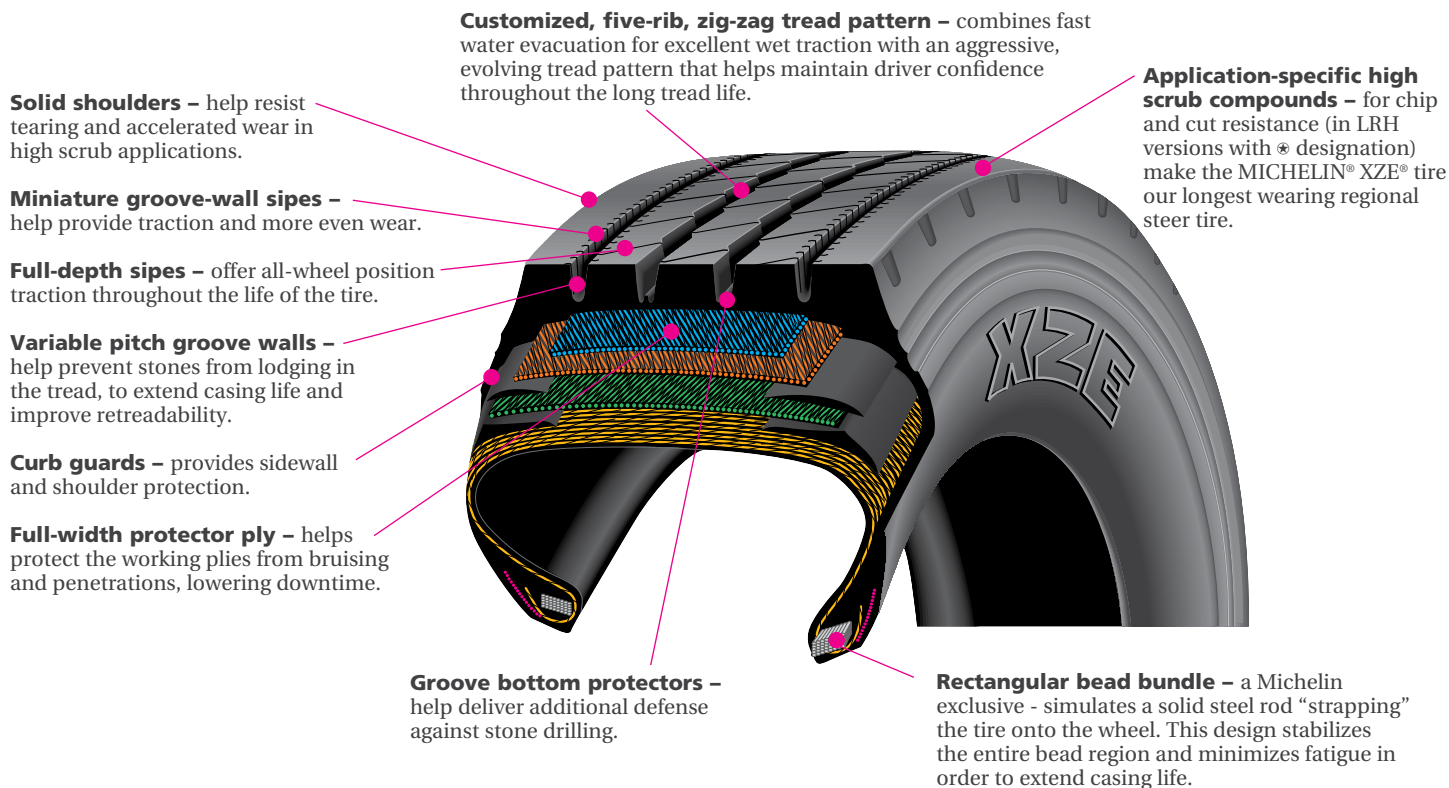
THE MICHELIN® XZE® TIRE

Exceptional all-position radial with extra-wide, extra-deep tread designed to help deliver our best wear in high scrub in regional and line haul applications.

Line Haul	Regional	Urban	On/Off Road
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recommended	Acceptable		



Exceptional all-position radial with extra-wide, extra-deep tread designed to help deliver our best wear in high scrub in line haul and regional applications.



Size	Load Range	Catalog Number	Tread Depth	Max. Speed (*)		Loaded Radius		Overall Diameter		Overall Width (‡)		Approved Wheels (Measuring wheel listed first.)	Min. Dual Spacing (§)		Revs Per Mile	Max. Load and Pressure Single				Max. Load and Pressure Dual			
			32nds	mph	kph	in.	mm	in.	mm	in.	mm		in	mm		lbs.	psi	kg.	kPa	lbs.	psi	kg.	kPa
225/70R19.5	G	91043	17	87	140	15.2	385	32.2	819	9.3	237	6.75, 6.00	9.7	246	640	3970	110	1800	760	3750	110	1700	760
245/70R19.5	H	75997	18	75	120	15.6	396	33.6	853	9.7	247	6.75, 7.50	10.7	272	619	4940	120	2240	830	4675	120	2120	830
10R22.5	G	99141	21	75	120	18.7	475	40.1	1018	10.2	259	6.75, 7.50, 8.25	11.1	282	517	5675	115	2575	790	5355	115	2430	790
12R22.5 *	H	85335	22	75	120	19.8	503	42.6	1082	11.4	290	8.25, 9.00	13.2	335	486	7390	120	3350	830	6780	120	3075	830
255/70R22.5 *	H	61737	18	75	120	17.2	437	36.7	932	10.2	260	8.25, 7.50	11.6	295	563	5510	120	2500	830	5070	120	2300	830
275/80R22.5	H	01637	22	75	120	18.7	475	40.2	1022	11.1	282	8.25, 7.50	12.2	311	516	7160	120	3250	830	6610	120	3000	830

* With chip and cut resistant tread compound.

Note: Wheel listed first is the measuring wheel.

(*) Exceeding the lawful speed limit is neither recommended nor endorsed.

(‡) Overall widths will change 0.1 inch (2.5 mm) for each 1/4 inch change in wheel width. Minimum dual spacing should be adjusted accordingly.

MICHELIN® tires and tubes are subject to a continuous development program. Michelin North America, Inc. reserves the right to change product specifications at any time without notice or obligations.

MNA, Inc. continually updates its product information to reflect any changes in Industry Standards. Printed material may not reflect the current Load and Inflation information. Please visit www.michelintruck.com for the latest product information. The actual load and inflation pressure used must not exceed the wheel manufacturer's maximum conditions. Never exceed a wheel manufacturer's limits without permission from the component manufacturer.



TO FIND OUT MORE

US: michelintruck.com

CA: michelintruck.com/en_ca



FIND US ON FACEBOOK

michelintruck.com



CONTACT US BY EMAIL

US: michelintruck.com/contact-us/

CA: michelintruck.com/en_ca/contact-us/



CONTACT US BY TELEPHONE

US: **1-888-622-2306**

CA: **1-888-871-4444**

Michelin North America Inc., One Parkway South, Greenville, SC 29615

Michelin North America (Canada) Inc., 2500 Daniel Johnson Blvd., Suite 500, Quebec H7T 2P6

The Michelin Man is a registered trademark owned by MNAI and MNA(C). All rights reserved. An Equal Opportunity Employer

© 2020 Michelin North America, Inc. © 2020 MNA(C). All rights reserved. PDF only (06/20)



BETTER VALUE • BETTER OPTIONS • BETTER LIGHTING

OPTRONICS® LED LIFETIME LIMITED WARRANTY



Optronics LED lighting products are warranted for the lifetime of original purchaser from defects in workmanship and/or materials only. Optronics will replace the product to the original purchaser or refund the purchase price if the product fails because of defect due to workmanship and/or materials. This limited lifetime warranty covers every and all diodes within each unit. Connector failure is covered by our three year limited warranty. The LED Lifetime Warranty does not apply to severe applications such as construction or off-road use and does not cover damage resulting from accident, misuse, or abuse. If warrantor is unable to provide replacement and repair is not commercially practicable or cannot be timely made, then warrantor will refund the purchase price. This offer does not constitute in any way a product guarantee and Optronics does not assume any obligations beyond replacement of the product. This warranty is not transferable and applies to the original installation of the product.

INCANDESCENT 3-YEAR LIMITED WARRANTY

Optronics' incandescent 12-volt lighting products are warranted for a period of three years from defects in workmanship and/or materials only. Optronics will replace the product to the original purchaser or refund the purchase price if the product fails because of defect due to workmanship and/or materials within the limited warranty period from the date or lot code printed on the product. If warrantor is unable to provide replacement and repair is not commercially practicable or cannot be timely made, then warrantor will refund the purchase price. This offer does not constitute in any way a product guarantee and Optronics does not assume any obligations beyond replacement of the product. This warranty is not transferable and applies to the original installation of the product.

CONSPICUITY TAPE LIMITED WARRANTY

Optronics' conspicuity tape products are warranted for a period of seven years from defects in workmanship and/or materials and adhesion failure only. Optronics will replace the product to the original purchaser or refund the purchase price if the product fails within the limited warranty period from the date or lot code printed on the product. If warrantor is unable to provide replacement and repair is not commercially practicable or cannot be timely made, then warrantor will refund the purchase price. This offer does not constitute in any way a product guarantee and Optronics does not assume any obligations beyond replacement of the product. This warranty is not transferable and applies to the original installation of the product.

PRODUCT REPLACEMENT PROCEDURES

To be eligible for Limited Warranty consideration, please contact your local authorized distributor/dealer or Optronics' customer service. Optronics' authorized distributor/dealer has full authority to issue an upfront warranty replacement/credit. If the product is found to be out of warranty at a later date, Optronics' customer service will rebill the customer for the replacement/credit. Customer service will determine if the failed product requires a return to Optronics. If return is required, a RETURN GOODS AUTHORIZATION NUMBER (RGA) will be issued.

THESE WARRANTIES DO NOT COVER DAMAGE RESULTING FROM ACCIDENT, MISUSE, OR ABUSE. CONSEQUENTIAL DAMAGES ARE EXCLUDED UNDER THIS WARRANTY AND ANY IMPLIED WARRANTY, EXCEPT FOR PERSONAL INJURY. THIS WARRANTY IS OFFERED IN LIEU OF ALL OTHER WARRANTIES. HOWEVER, MODIFICATION, LIMITATIONS OR EXCLUSIONS ON IMPLIED WARRANTIES MAY BE UNENFORCEABLE IN SOME STATES. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.



OKLAHOMA

401 South 41st Street East
Muskogee OK 74403
Warranty Contact – Michelle Majors
Phone – 800-364-5483 ext. 349
Fax – 918-683-9517

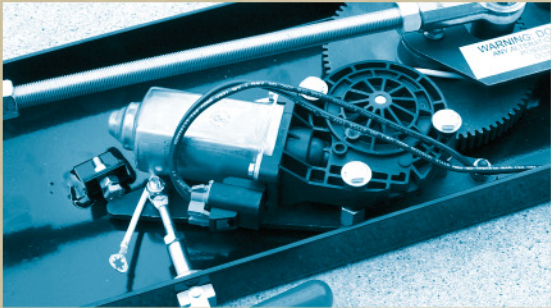


INDIANA

3535 Corrie Drive
Goshen IN 46526
Warranty Contact – Keia Rolston
Phone – 800-826-5483 ext. 120
Fax – 574-389-0041

Quality in Design

Looking past the simplicity in design, you'll see a quality product—from powdercoated base plates to plated rods, from zinc plating to tempered glass. Indeed, "reliability" is a descriptor that applies to the entire product. With confidence, we offer a comprehensive one-year warranty. Beyond the warranty period however, you can expect years of trouble-free operation. In the unlikely event that service is ever required, the design also facilitates unparalleled ease of access.



Custom Design

While we do offer specific product families to address the needs of most manufacturers, A&M Systems specializes in designing to your specifications. Pin to pin lengths can vary between 26 and 46 inches. Header width can range from 7 to 11.5 inches. Our ability to manufacture to specification has lead top manufacturers to abandon their own production and design efforts and to choose the A&M Systems product.

In addition, those operating in the after-market have found that our actuators can be used as drop-in, direct replacement for older, less reliable door headers.

About A&M Systems

For years we've specialized in designing and manufacturing problem-free door actuators. In more recent times, we took our expertise to the door leaves as well.

We are a service-oriented company with keen insight into the industry. We offer agile manufacturing, short lead times, and just-in-time production. Our cost-conscious approach pleases the purchasing agent. Ease-of-installation pleases production personnel. Ease-of-operation pleases the end user. And the quality and reliability of our products pleases everyone.

We are committed to quality in design, quality in production, and quality in service.

Contact Information

A&M Systems, Inc.
1845 Fieldhouse
Elkhart, IN 46517
Phone: 574.522.5000
Fax: 574.522.9099

Email: sales@anmsystems.com

www.anmsystems.com



Transit Bus Doors & Actuators

USING 42" WIDE MODEL
FOR WVDOT

Simple is Better

One look at our product line reveals our design approach: simple is better. We carefully engineer bus doors and actuators (headers) to operate smoothly and reliably while eliminating the problem-prone and complex design elements that plague our competitors' products. The result is a product line which has become the number one choice for manufacturers of small and medium-size buses.

Simplicity in design leads to simplicity in installation and simplicity in operation. It also means that we can offer a superior product at the best possible pricing to you.

Simplicity in design does not mean shortcuts in our production, however. We've put years of engineering effort into perfecting the design of our manual and electric door actuators and door leaves. Operational testing is conducted 24/7. Life-cycle testing has produced in excess of a quarter million trouble-free cycles.

Innovation is not lost in our efforts to maintain simplicity. For example, the variable ratio closing on our manual actuator is a patent-pending design. Consider also the re-engagement of our electric actuator following emergency opening. This scenario resulted in extremely complex approaches in competitive products. Our actuator easily and automatically recycles when the motor is reengaged.

In operation, our products are unsurpassed, achieving perpendicular door openings with either electric and manual models as well as secure closings—even at highway speeds.

Product Line Overview

The A&M product line consists of door leaves (often called “flops”) and manual and electric door actuators (often referred to as “headers”). In working together, these products create an attractive, functional, efficient, and robust entry system for small and medium-size buses in the transit industry.

In this system you will find a harmony of movement that speaks to design and manufacturing excellence. Every A&M door system produces completely perpendicular door openings—every time. In the A&M system, the forward door opens first and closes last—always. In the A&M system there is not a reliance on troublesome components (such as spring-loaded push-pull rods)—ever.

You can rely on A&M Systems to provide a distinctive entry system that opens smoothly and closes securely. Likewise, we will provide a business relationship guaranteed to help you succeed.



Manual Actuators Features

- ◆ Low-profile design
- ◆ Powder-coated base plate
- ◆ Plated push rods
- ◆ Permanently lubricated pivot points
- ◆ 1-year warranty



Electric Actuators Features

- ◆ Low-profile design
- ◆ Powder-coated base plate
- ◆ Plated push rods
- ◆ Permanently lubricated pivot points
- ◆ Motor control PC board
- ◆ Proprietary, heavy-duty motor
- ◆ Available wireless remote
- ◆ 1-year warranty

New! Wireless Remote Option

Now enjoy the benefits of remote door operation through a wireless key fob. This option adds to the convenience of an electronic A&M door system. It offers plug-n-play installation and it's retrofitable!



Door Features

- ◆ Key-lock joint (extremely rigid, no-weld design)
- ◆ Corrosion resistance aluminum and stainless steel
- ◆ Torque arm on upper hinge (unique and zinc plated)
- ◆ Tempered glass
- ◆ Tough, clear coat, anodized finish (204 R1 rated)
- ◆ Radius edge for clean mating to seal
- ◆ Leaves are ambidextrous! (Use in either forward or aft position)
- ◆ 1-year warranty



RAIN BOOTH INFORMATION

Constructed and opened in 2005 as part of a corporate-wide, pre-delivery inspection facility, the Forest River 20 ft. x 50 ft. motorized vehicle rain booth utilized by Forest River Bus offers exceptional performance in the area of water leak detection.

The vehicle rain booth adds front wall nozzles, simulating the pelting of oncoming rain at high-way speeds. The rain booth includes two 1200 gallon recycling tanks and utilizes a 12 horsepower pump with multi-bank filters capable of delivering 40 to 60 p.s.i. That equates to 300 gallons per minute pushed through the spray heads, or the equivalent of a 24 inch-per-hour downpour!



With nozzles directed at the roof, sidewalls, front and undercarriage, nothing goes untouched in our quest for leak elimination. Using both velocity and volume in our test procedure ensures our valuable customers that we are doing the utmost to deliver a leak-free product to them.



FOREST RIVER BUS

2367 Century Drive • Goshen, Indiana 46528 • 800.348.7440 • www.forestriverinc.com

1 Channel PA Amplifier

#700962

Supplied with Gooseneck microphone and foot switch.



Description

2 microphone inputs

50 Watt power output

XLR priority microphone input overrides Mini-Fit secondary microphone input

Volume control and AUX audio input (1 channel)

Separate internal/external volume control and AUX audio inputw/speaker selectability (2 channel)

Approved OEM standard option equipment

8"L x 3.125"W x 1.75"H





📍 6534 L St, Omaha, NE 68117

☎ 1.402.339.2200

☎ 800.228.9275

✉ info@radioeng.com

Copyright © 2017-2020 REI



SCHOOL AND SHUTTLE BUS ROOF HATCHES

TRANSPEC[®]
A Safe Fleet Brand

SAFE EGRESS. PROVEN PERFORMANCE.

Using 1970 Series for
WV DOT



ADAPTABLE
Low profile design
adapts to wide range of
roof surfaces



MADE IN THE USA
Proudly manufactured
in North Carolina
with 35 years proven
product performance



MAINTENANCE
No external fasteners
required for installation



WARRANTY
5 year



STRENGTH
Constructed of high
strength UV stable
materials



Serves as a vent on hot summer days

SPECIFICATIONS

SCHOOL AND SHUTTLE ROOF HATCHES

■ = Standard O = Optional

MODEL	STANDARD FEATURES & OPTIONS	APPLICATIONS	SIZES
T1170 Series Triple Value Safety Vent II	White Light Gray Dark Gray	■ ■ ■ ■ O O O O	■ ■ ■
T1670 Series Power Safety Vent II	White Light Gray Dark Gray Beige	■ ■ ■ ■ O O O O	■ ■ ■
T1970 Series Standard Safety Vent II	White Light Gray Dark Gray Beige	■ ■ ■ O O O O	■ ■ ■
9245 Series Pro Lo Roof Hatch	White Light Gray Dark Gray	■ ■ ■ O O O O	■ ■ ■

T1170 Series / Triple Value Safety Vent II

The Triple Value Safety Vent II is a combination roof ventilator/emergency exit that provides 5-position fresh air ventilation as well as incorporating a built in non-closeable static exhaust vent. The product also includes a simple release handle that allows the hatch to hinge open for emergency exit.



Additional Features

- Static Vent provided with one piece outer cover designed to minimize leaks
- Interchangeable with earlier Transpec models
- Available in various radiuses to fit different roof curvatures
- Available with vandal lock feature
- Constructed of high strength UV stable materials
- Available with optional adhesive sealant and reflective tape
- Meets D250 Standard for Canadian school bus

T1670 Series / Power Safety Vent II

The Power Safety Vent II provides all the features of the Triple Value Safety Vent II with the addition of an electric fan for extracting condensation, stale or hot air from inside the vehicle to improve passenger comfort.



Additional Features

- Interchangeable with earlier Transpec models
- Available in 12 and 24 volt
- Available in various radiuses to fit different roof curvatures
- Constructed of high strength UV stable materials
- Available with optional adhesive sealant and reflective tape
- Meets D250 Standard for Canadian school bus

T1970 Series / Standard Safety Vent II

The Standard Safety Vent II is a combination roof ventilator/emergency exit that provides 5-position fresh air ventilation and a simple release handle that allows the hatch to hinge open for emergency exit.



Additional Features

- Retrofits to all hatch openings
- Interchangeable with earlier Transpec models
- Available in various radiuses to fit different roof curvatures
- Constructed of high strength UV stable materials
- Available with optional adhesive sealant and reflective tape

9245 Series / Pro Lo Roof Hatch

The Pro Lo is a combination roof ventilator/emergency exit that mounts nearly flush with the roof (0.75" above the roof). Designed to fit the roof curvature, it creates a tight seal virtually eliminating water intrusion. The hatch also incorporates a release handle allowing it to be opened as an emergency exit.



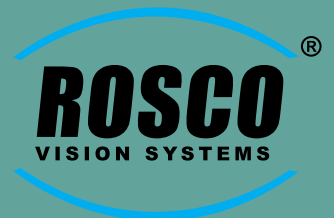
Additional Features

- Available in various radiuses to fit different roof curvatures
- Nearly flush at 0.75" above the bus
- Constructed of high strength UV stable materials
- No exterior screws for installation
- Available with vandal lock feature
- Meets D250 Standard for Canadian school bus



Using Accustyle 818,
Heated, Remote Mirrors for
WV DOT

AccuStyle® & EuroStyle® Series **Rearview Mirror Systems**



A Century of Automotive Vision Safety

The following pages demonstrate all the advantages of Rosco’s dual-lens remote mirrors for the school bus industry. Two distinct sizes and models cover all the needs of a multitude of applications. A list of some major features is shown at bottom right. A variety of heavy-duty breakaway mounting arms are available to satisfy every requirement and budget. (pls see pgs. 13,15)

The AccuStyle® Story

The AccuStyle® Series mirrors combine the functionality of the EuroStyle® Series with the unique engineering capability to also be retrofitted to old or new “Loop” style arms. The AccuStyle® mirrors can be mounted on two-point, upright or overhang arms. Although employing light weight materials and construction principles, the heavy duty “spine” structure isolates the mirror from vibrations. In addition, the sleek, aerodynamic shape and light texture lowers wind drag which can lead to cost savings through greater fuel efficiency.



Smooth aerodynamic shape with full rear cover for connector and clamp access



Available in two-point mount configuration



Heavy duty spine structure

The EuroStyle® Story

These masterpieces of design engineering, combine a traditional yet elegant design in an extremely functional and feature-rich package. Advantages range from hidden wiring and fasteners to vibration resistance. Space-age resins and attractive heavy texture finish, combined with stainless steel internal components make these mirrors durable and corrosion proof.



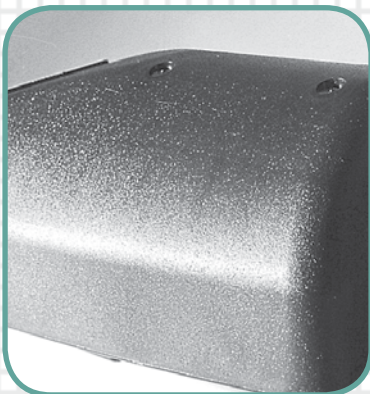
Easy access to connectors



Mirror-Lok system holds mirror glass tightly while allowing for easy replacement



Heavy-duty spine structure



Textured finish hides scratches and fingerprints

Table of Contents

THE ACCUSTYLE® STORY	2
THE EUROSTYLE® STORY	3
ACCUSTYLE® 815	4-5
ACCUSTYLE® 818	6-7
EUROSTYLE® 715	8-9
EUROSTYLE® 717	10-11
ADVANCED OPTIONS	12
SPRING-BREAK® BREAKAWAY SYSTEMS	13
E-Z BRACKET® & DUAL-WALL ARM	14-15
SWITCHES AND HARNESSES	16
PROPER MIRROR ADJUSTMENT	17
DUAL-VISION™ XC	18
BACKUP SAFETY PRODUCTS	19

Advanced Features for AccuStyle® and EuroStyle®

- Heavy-duty A.S.A. resin injection-molded housing.
- Aerodynamic styling with no obvious wires or fasteners.
- Available in different sizes with a variety of mounting options.
- Easily replaceable glass. No need for velcro.
- Both flat and convex mirrors separately motorized and heated. Each 4 way adjustable.
- Internal lens or exterior LED turn directionals.
- Available in manual version with fingertip adjustable glass.
- Packaged as components or as complete systems.
- Custom wire harnessing available with many styles of connectors and switches.
- Internal harnessing fed through arm to eliminate unsightly wire ties and protect wiring.
- Available in 12 or 24 volt, heated or unheated.
- Spring-loaded breakaway mechanism on mounts allows for easy return to detent position.
- Patented Spring-Break® Breakaway arm system, dampens vibration.

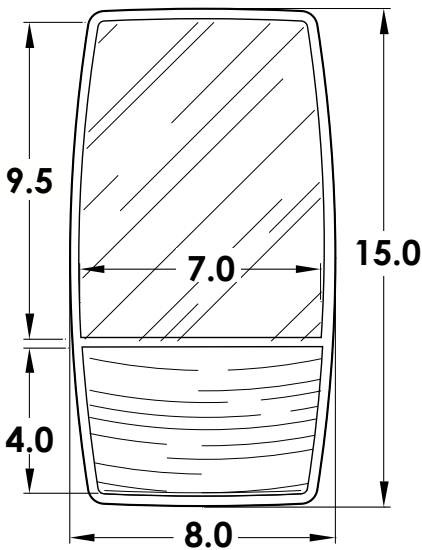
Features and Benefits

- Lightweight, vibration reducing design.
- Certified by OEMs to meet FMVSS-111 requirements.
- Same model can be mounted as upright, overhang or two point mount.
- Reduces inventory of replacement parts.
- Aerodynamic, wind tunnel tested profile has lower drag coefficient for increased fuel economy.
- Available motorized or hand adjustable.
- Available with heated and LED turn signal options
- Each motorized mirror lens is four way adjustable.
- Hidden wire and connectors.
- Black or chrome finish is available.
- Full height rear entry cap allows for simple installation and ease of maintenance, including access to all wires and harnesses.



Model 815U
Shown with E-Z Bracket
combination assembly

Rearview Mirror System



REPLACEMENT PARTS

PART NO.	DESCRIPTION
815/1	7" x 9.5" flat mirror glass
815D/1	7" x 4" convex mirror glass
815/4	7" x 9.5" flat mirror carrier and motor assembly
815D/4	7" x 4" convex mirror carrier and motor assembly
M815/4	7" x 9.5" flat mirror carrier and hand swivel assembly
M815D/4	7" x 4" convex mirror carrier and hand swivel assembly
CAP1042	Rear access cover for 815 mirror head, two point mount
CAP1056	Rear access cover for 815 mirror head, overhang or upright mt
CAP1034	Grommet, rubber, for 1" tube, no harness hole
CAP1058	Grommet, rubber, for 3/4" tube, no harness hole
CAP1044	Grommet, rubber, for 1" tube, harness hole
CAP1045	Grommet, rubber, for 3/4" tube, harness hole
815/SHELL	815 two point mount housing (includes internal spine/clamps)
815OGU/SHELL	815 overhang/upright housing (includes internal spine/clamps)
815SL/1	7" x 9.5" flat mirror glass with Left signal LEDs
815SR/1	7" x 9.5" flat mirror glass with Right signal LEDs

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/"
or Add "H" in Front of the "/" When Present.

AccuStyle® 815 series 8"x15" Dual Mirrors

PART NO.	DESCRIPTION
815	8" x 15" dual mirror, two point mount, motorized, 12 volt
815ELU / 815ERU	8" x 15" dual mirror, upright mount, motorized 12 volt with Left or Right external signal LEDs
815OG	8" x 15" dual mirror, overhang mount, motorized, 12 volt
815SL / 815SR	8" x 15" dual mirror, two point mount, motorized 12 volt with Left or Right mirror lens signal LEDs
815SLU / 815SRU	8" x 15" dual mirror, upright mount, motorized 12 volt with Left or Right mirror lens signal LEDs
815SLOG / 815ROG	8" x 15" dual mirror, overhang mount, motorized 12 volt with Left or Right mirror lens signal LEDs
815U	8" x 15" dual mirror, upright mount, motorized, 12 volt
CBL815U	8" x 15" dual mirror, upright mount, motorized 12 volt with Left or Right integrated camera
CBR815U	8" x 15" dual mirror, upright mount, motorized 12 volt with Left or Right integrated camera
M815	8" x 15" dual mirror, two point mount, hand adjustable
M815OG	8" x 15" dual mirror, overhang mount, hand adjustable
M815U	8" x 15" dual mirror, upright mount, hand adjustable

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/"
or Add "H" in Front of the "/" When Present.



Model 815



AccuStyle® 818 Series

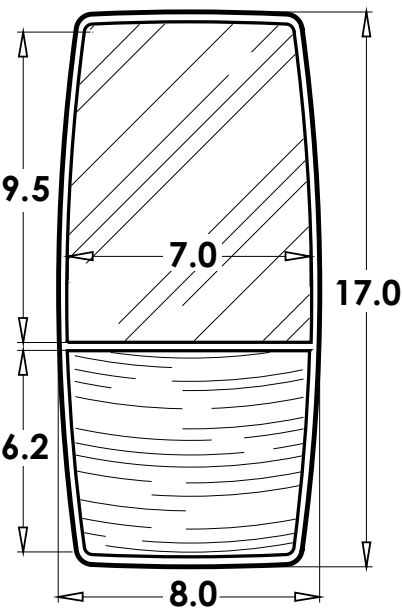
Features and Benefits

- Lightweight,vibration reducing design.
- Certified by OEMs to meet FMVSS-111 requirements.
- Same model can be mounted as upright, overhang or two point mount.
- Reduces inventory of replacement parts.
- Aerodynamic, wind tunnel tested profile has lower drag coefficient for increased fuel economy.
- Oversized 8" x 17" housing provides additional mirror surface.
- Used on all large school and commercial bus types, including conventional and transit style platforms.
- Available motorized or hand adjustable.
- Available heated and with LED turn signal options.
- Each motorized mirror lens is four way adjustable.
- Full height rear entry cap allows for simple installation and ease of maintenance, including access to all wires and harnesses.
- Black or chrome finish is available.



Model 818 with
Stainless Steel Arm

Rearview Mirror System



REPLACEMENT PARTS

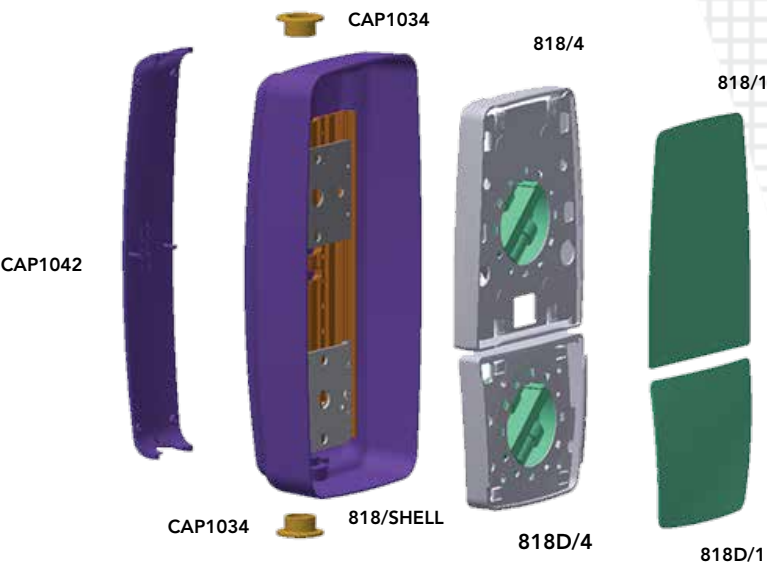
PART NO.	DESCRIPTION
818/1	7" x 9.5" flat mirror glass
818D/1	7" x 6" convex mirror glass
818/4	7" x 9.5" flat mirror carrier and motor assembly
818D/4	7" x 6" convex mirror carrier and motor assembly
M818/4	7" x 9.5" flat mirror carrier and hand swivel assembly
M818D/4	7" x 6" convex mirror carrier and hand swivel assembly
CAP1057	Rear access cover for 818 mirror head, two point mount
CAP1071	Rear access cover for 818 mirror head, overhang or upright mount
CAP1034	Grommet, rubber, for 1" tube, no harness hole
CAP1058	Grommet, rubber, for 3/4" tube, no harness hole
CAP1044	Grommet, rubber, for 1" tube, with harness hole
CAP1045	Grommet, rubber, for 3/4" tube, with harness hole
818/SHELL	818 two point mount housing (includes internal spine/clamps)
818OGU/SHELL	818 overhang/upright housing (includes internal spine/clamps)
818SL/1	7" x 9.5" flat mirror glass with Left signal LEDs
818SR/1	7" x 9.5" flat mirror glass with Right signal LEDs

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/" or Add "H" in Front of the "/" When Present.

AccuStyle® 818 series 8"x17" Dual Mirrors

PART NO.	DESCRIPTION
818	8" x 17" dual mirror, two point mount, motorized, 12 volt
818OG	8" x 17" dual mirror, overhang mount, motorized, 12 volt
818SLU / 818SRU	8" x 17" dual mirror, upright mount, motorized 12 volt with Left or Right signal LEDs
818SLOG / 818SROG	8" x 17" dual mirror, overhang mount, motorized 12 volt with Left or Right signal LEDs
818U	8" x 17" dual mirror, upright mount, motorized, 12 volt
M818	8" x 17" dual mirror, two point mount, hand adjustable
M818OG	8" x 17" dual mirror, overhang mount, hand adjustable
M818U	8" x 17" dual mirror, upright mount, hand adjustable

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/" or Add "H" in Front of the "/" When Present.



Features and Benefits

- Certified by OEM's to meet FMVSS-111 requirements.
- Compact 8" x 15" housing reduces forward blind spots.
- Available in upright and overhang configurations.
- Used on all large school and commercial bus types, including conventional and transit style platforms.
- Available motorized or hand adjustable.
- Available heated and with LED turn signal options.
- Hidden wiring and connectors.
- 4-way adjustable motors.
- Available in black textured finish to help conceal surface blemishes such as scratches and road grime.

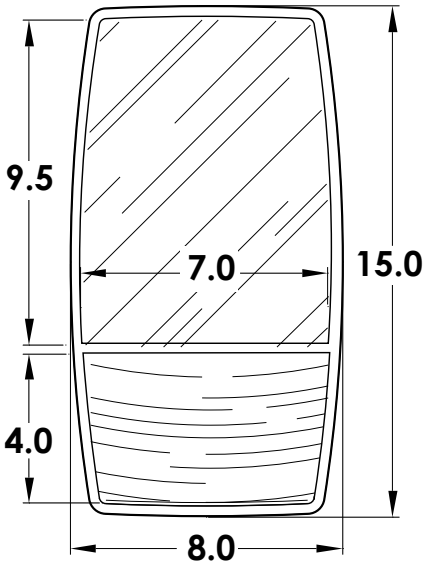


Model 715
shown with upright
Spring-Break®
mounting arm



Model 715SR

Rearview Mirror System



REPLACEMENT PARTS

PART NO.	DESCRIPTION
715/1	7"x 9.5" flat mirror glass
715D/1	7"x 4" convex mirror glass
715/4	7"x 9.5" flat mirror carrier and hand swivel assembly
M715/4	7"x 9.5" convex mirror carrier and hand swivel assembly
M715D/4	7"x 4" convex mirror carrier and hand swivel assembly
CAP	Connector access panel available with various company logos
CAP1001	Rubber grommet for 715 & 717 series mirrors
715/SHELL	Shell for 715 mirrors
715SL/1	7"x 9.5" flat mirror glass with left signal LEDs
715SR/1	7"x 9.5" flat mirror glass with right signal LEDs

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/"
or Add "H" in Front of the "/" When Present.

EuroStyle® 715 series 8"x15" Dual Mirrors

PART NO.	DESCRIPTION
715	8" x 15" dual mirror, upright mount, 12 volt motorized
715I	8" x 15" dual mirror, upright mount, 12 volt motorized, wired for International switch
715OG	8" x 15" dual mirror, overhang mount, 12 volt motorized
715IOG	8" x 15" dual mirror, overhang mount, 12 volt motorized, wired for International switch
715SL / 715SR	8" x 15" dual mirror, upright mount, motorized 12 volt with Left or Right signal LEDs
715SLOG / 715SROG	8" x 15" dual mirror, overhang mount, motorized 12 volt with Left or Right signal LEDs
715T	8" x 15" dual mirror, two point mount, 12 volt motorized
M715	8" x 15" dual mirror, upright mount, hand adjustable
M715OG	8" x 15" dual mirror, overhang mount, hand adjustable
M715T	8" x 15" dual mirror, two point mount, hand adjustable

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/"
or Add "H" in Front of the "/" When Present.

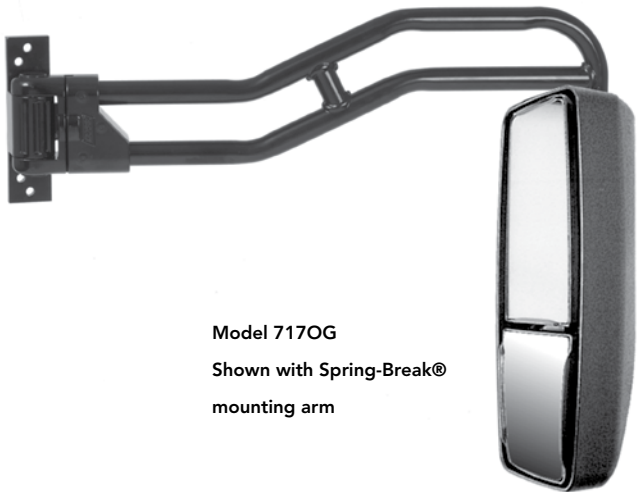


Model 715OG



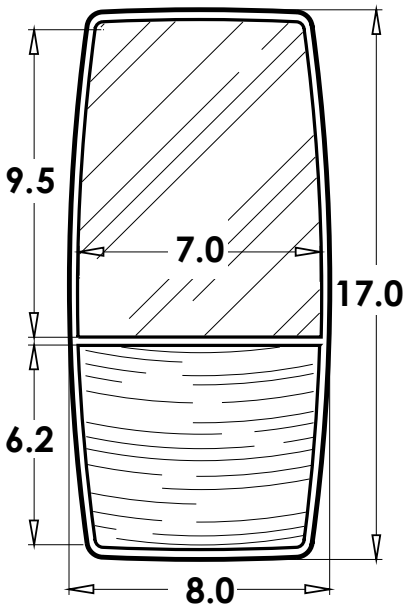
Features and Benefits

- Certified by OEMs to meet FMVSS-111 requirements.
- Oversized 8" x 17" housing provides additional mirror surface.
- Available in upright and overhang configurations.
- Used on all large school and commercial bus types, including conventional and transit style platforms.
- Available motorized or hand adjustable.
- Available heated and with LED turn signal options.
- Hidden wiring and connectors.
- 4-way adjustable motors.
- Available in black textured finish to help conceal surface blemishes such as scratches and road grime.



Model 717OG
Shown with Spring-Break®
mounting arm

Rearview Mirror System



REPLACEMENT PARTS

PART NO.	DESCRIPTION
717/1	7" x 9.5" flat mirror glass
717D/1	7" x 6" convex mirror glass
717/4	7" x 9.5" flat mirror carrier and motor assembly
717D/4	7" x 6" convex mirror carrier and motor assembly
717SL/1	7" x 9.5" flat mirror glass with Left signal LEDs
717SR/1	7" x 9.5" flat mirror glass with Right signal LEDs
M717/4	7" x 9.5" flat mirror carrier and hand swivel assembly
M717D/4	7" x 6" convex mirror carrier and hand swivel assembly
CAP	Connector access panel available with various company logos
CAP1001	Rubber grommet for 715 & 717 series mirrors
717/SHELL	Shell for 717 mirrors

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/"
or Add "H" in Front of the "/" When Present.

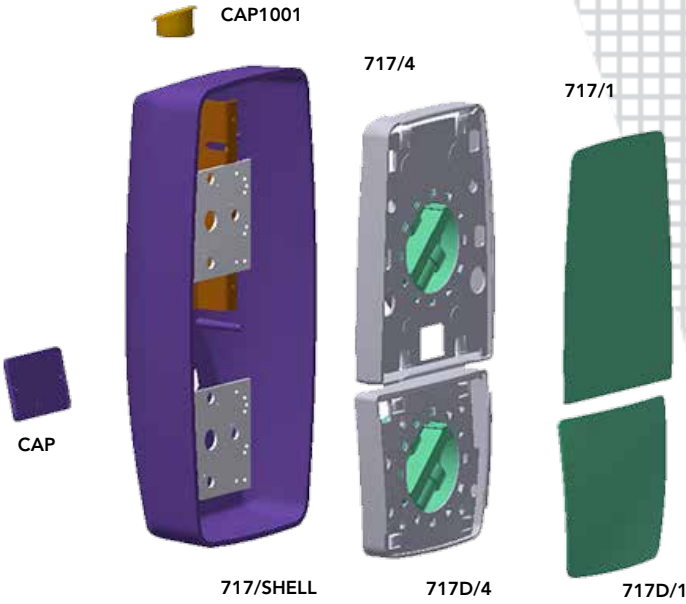
EuroStyle® 717 series 8"x17" Dual Mirrors

PART NO.	DESCRIPTION
717OG	8" x 17" dual mirror, overhang mount, 12 volt motorized
717IOG	8" x 17" dual mirror, overhang mount, 12 volt motorized, wired for International switch
717U	8" x 17" dual mirror, upright mount, 12 volt motorized
717IU	8" x 17" dual mirror, upright mount, 12 volt motorized, wired for International switch
717SLU / 717SRU	8" x 17" dual mirror, upright mount, motorized 12 volt with Left or Right signal LEDs
717SLOG / 717SROG	8" x 17" dual mirror, overhang mount, motorized 12 volt with Left or Right signal LEDs
M717OG	8" x 17" dual mirror, overhang mount, hand adjustable
M717U	8" x 17" dual mirror, upright mount, hand adjustable

For Heated Mirrors, Add "H" to the End of All Part Numbers Without a "/"
or Add "H" in Front of the "/" When Present.



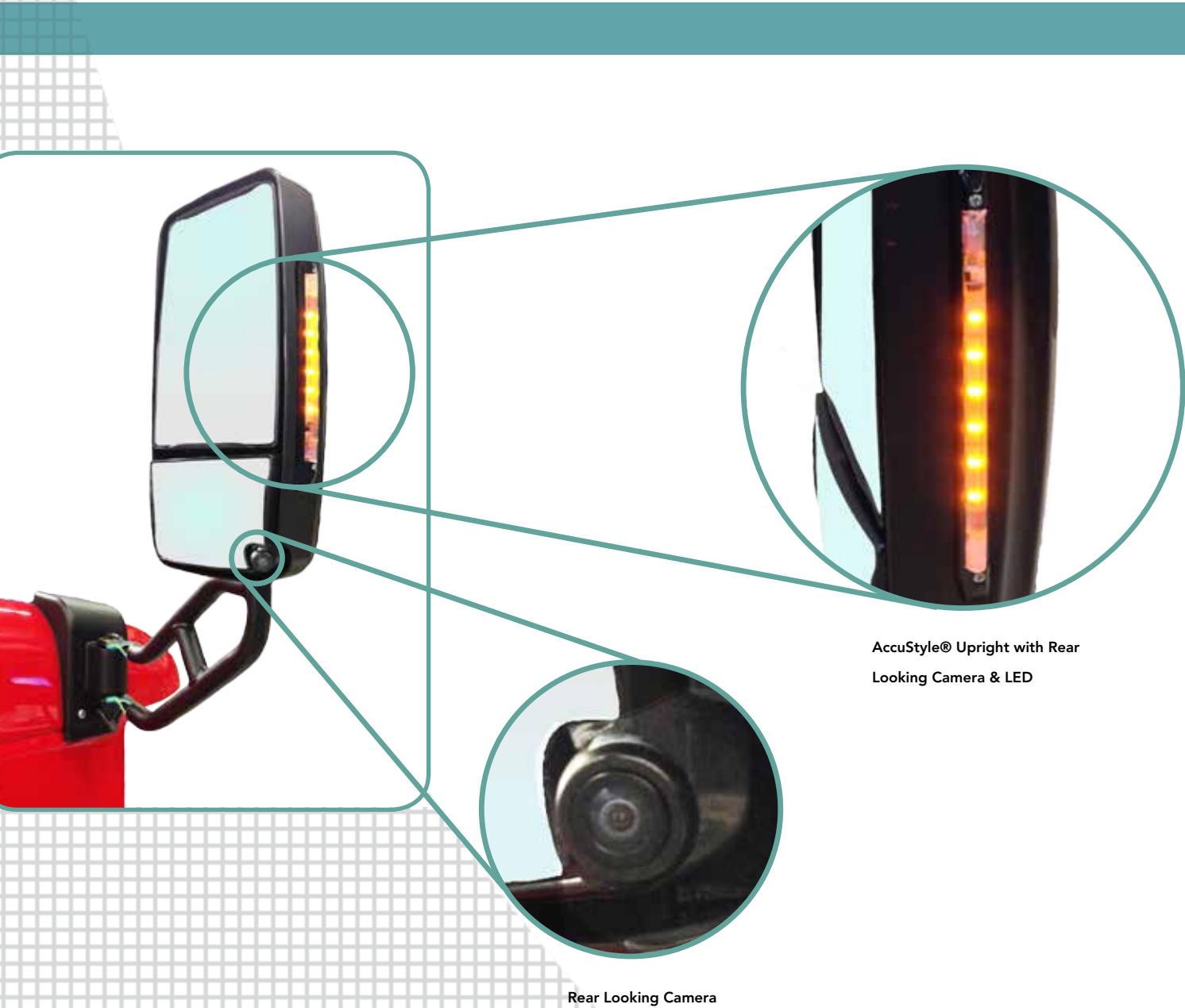
Model 717SRU



Advanced Options for AccuStyle® Mirror Heads

AccuStyle® with Rear Looking Camera

& External Signal LED



External Signal LED

Add Rosco LED side marker lights for omni-directional vehicle alerts to other drivers and pedestrians.

Rear Looking Camera

Add Rosco blind spot/wide angle viewing cameras to help driver visibility. The industry's only integrated mirror camera that adjusts positions with the convex mirror lens adjustment (both manual and remote control).

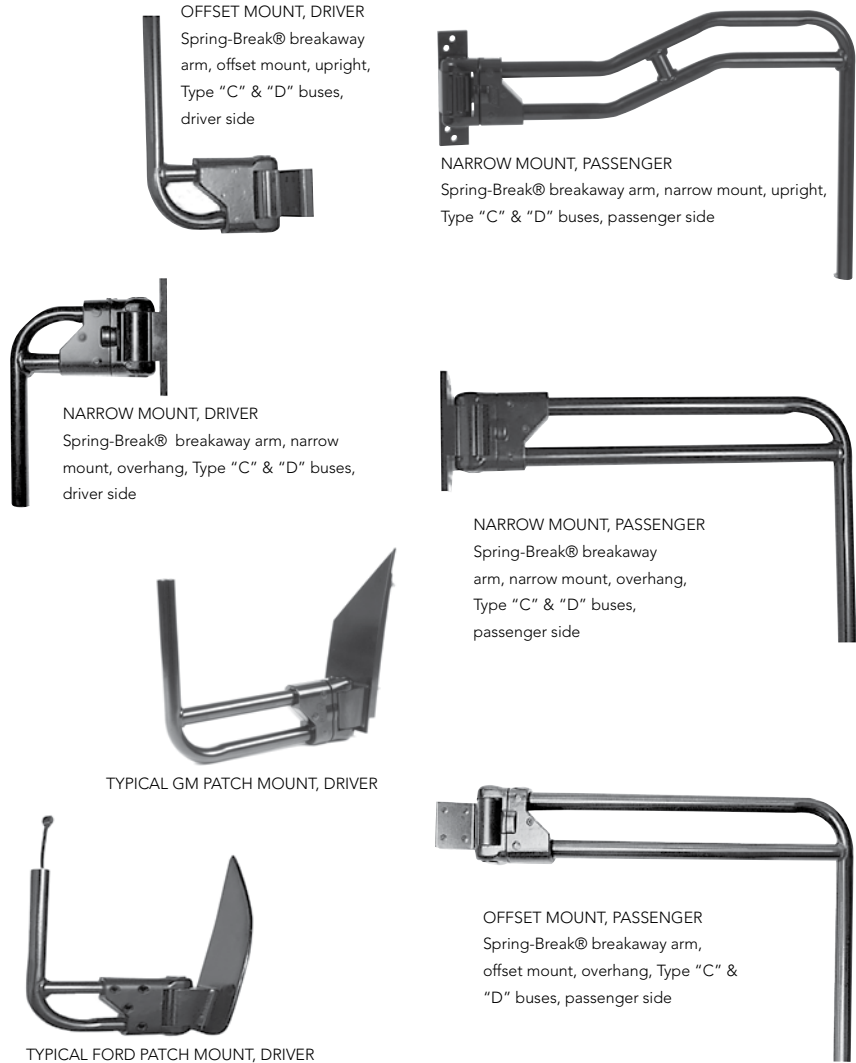
Spring-Break® and Swivel Arm Breakaway Systems

This line of mounting arms has a unique spring loaded detent mechanism that dampens vibration and keeps the arm locked in position. Heavy-duty aluminum castings sandwich a dual tubular arm for maximum hold with no maintenance requirements.

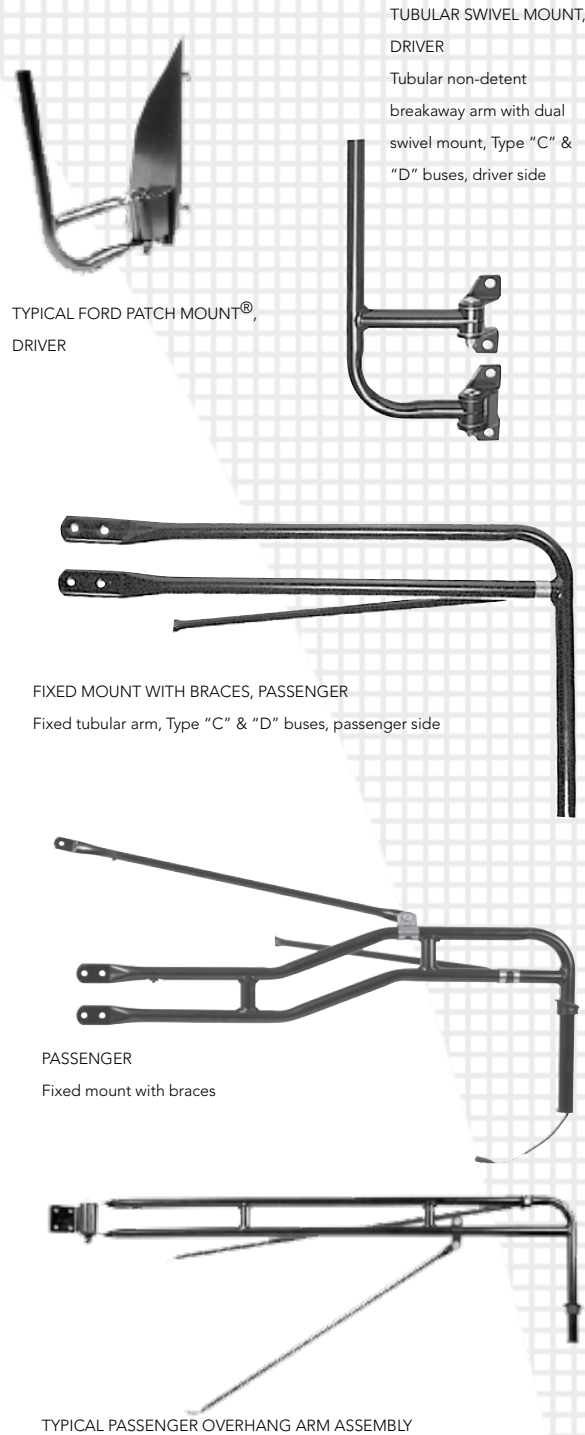
Tubular arm construction keeps things economical. The arm is concealed inside the AccuStyle® or EuroStyle® mirror housing with concealed fasteners.

Economy models offer breakaway swivel arms, or fixed arms. Fender mount systems are available for Ford, GM, and other cutaway buses.

Spring-Break® Detent



Swivel and Fixed Mount Arms



E-Z Bracket®

Combination Rearview and Cross View Arm Assemblies

Rearview Fender Mount with Spring-Break® Detent

Features and Benefits

- Simple and Fast Installation: Rosco's patented E-Z Bracket® System makes installation of a Type "A" school bus mirror system easier than ever before (Patent No. 7,055,973).
- The under-the-fender mount utilizes existing fender mounting bolts to secure the mount below the hood.
- Rosco's unique ferrule system transfers the strength of the inner heavy-gage wall to the exterior of the vehicle.
- Installation is completed with three holes instead of as many as twelve.
- Eliminates the large arms and two braces commonly used on passenger side mirrors until now.
- Massive cast aluminum mounting base provides a stable mount for vibration resistance and durability.
- Low-profile construction is aerodynamic and aesthetically appealing.
- Contoured profile matches the fender perfectly for a solid mount that looks great on the vehicle.
- Available for both Ford and GM vehicles.



Ford E-Z Bracket® Installation with Model 815U AccuStyle® and Hawk-Eye® Cross View Combo Assembly

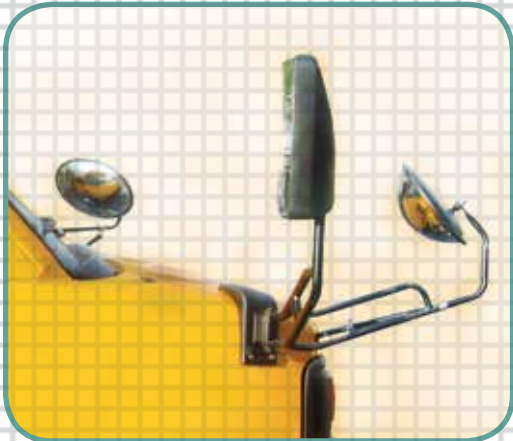
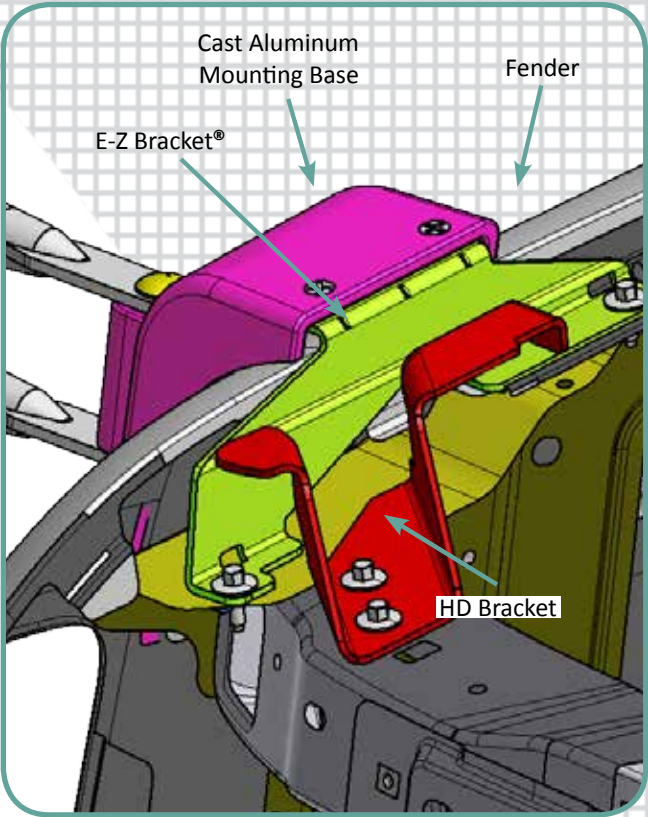
Rosco's Unique Mounting and Arm Options

HD E-Z Bracket®

Dual-Wall Breakaway Swivel Arm



HD E-Z Bracket® Installation
Rosco's HD E-Z Bracket® maximizes holding force with OEM inner hood components to simplify installation and minimize vibration.



GM E-Z Bracket® Installation with Model 715 EuroStyle® and Hawk-Eye® Cross View Combo Assembly

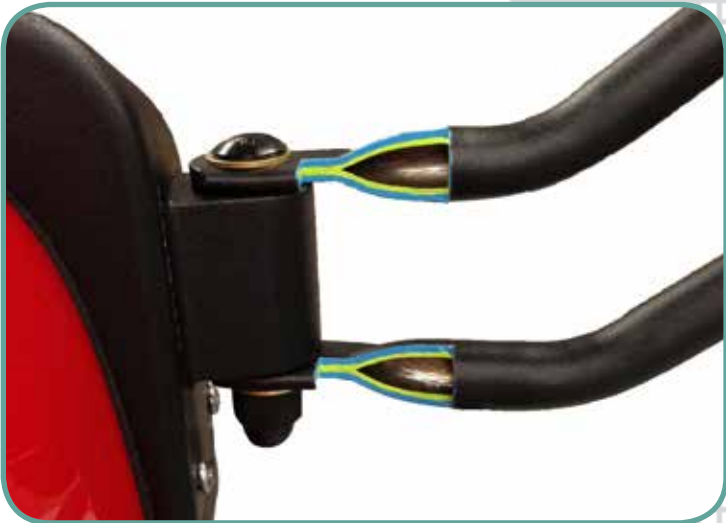


Fender Mount Rearview Mirror Assembly with Spring-Break® Detent (Non Combination Assembly)



GM E-Z Bracket® with Model 815 AccuStyle® and Eye-Max® LP Cross View Combo Assembly

Rosco's Dual-Wall breakaway swivel arms allow for unlimited adjustment and positioning of the mirror while rigidifying the connection to the mounting base. The result is a mirror arm that virtually eliminates vibration.



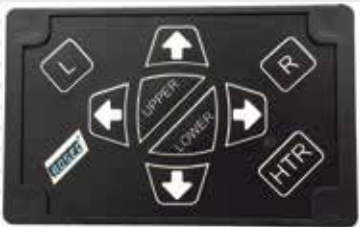
Control Switches & Custom Wire Harnessing

A variety of switches, including heater controls and timers, are available to suit all requirements. Wire harnesses are available from stock or in custom lengths, with many different standard and weatherproof connectors.

- A variety of mirror control switches in various sizes to meet every need.
- Heater control switches available in two types with optional heater timer.
- Illuminated membrane switches with combination heater and remote control for up to four lenses.

Switches and Components

PART NO	DESCRIPTION
SW-1	Remote mirror control switch, 12V lighted, 1.330"x 1.330", 12" harness
SW-3	Remote mirror control switch, 12V, 1.4" diameter, 12" harness
SW-4	Mirror heater toggle switch, 1"x 0.5"
SW-5	Mirror heater momentary switch, 1"x 0.5"
SW-5-HT	Mirror heater momentary switch, with 10 minute heater timer relay
SW-6	Mirror heater toggle switch, 1/2" diameter
HAR5012	Switch Plate Assembly, 2 remote switches and 1 momentary heater switch w/ 10 minute heater timer relay, w/ 10 pin connectors for LED turn signal
HAR5013	Switch Plate Assembly, 2 remote switches and 1 momentary heater switch w/ 10 minute heater timer relay



SWI1011

Rosco's family of remote control/heater membrane switches consolidates the function of two "knob" style switches and one heater with auto shut-off switch. The membrane switch combines the switches into a small solid package with illumination, circuit protection and unmatched durability.

Ford E - Series Driver Door Mounted Switches

PART NO	DESCRIPTION
HAR5020	Switch Pod w/toggle heater switch, red illuminated & 2 remote switches
HAR5024	Switch Pod w/toggle heater switch, green illuminated
HAR5029	Switch Pod w/momentary heater switch (red), timer, 2 remote switches
HAR5032	Switch Pod w/momentary heater switch (red), timer, 2 remote switches, 10 pin connectors for LED mirror turn



Custom Wire Harnessing

- Harnesses can have custom lengths.
- Conductors available in various gauges.
- Durable connection systems for superior harnessing between mirror, arm and switch.
- Weather proof connectors are available and grommets pre-installed on harnesses.
- Connectors from various companies, including: Tyco/AMP, ITT Canon, Delphi Packard and Deutsch, as well as others.
- In house high speed termination equipment provides fast turnaround.
- UL certified wire.
- Miniature connectors allow smaller holes in vehicle body.
- Multi-conductor cabling available in 2-lead for heating only, 4-lead for single motor control and 8-lead for dual motor control and heating.

Harness Types

1. Arm Harness- Concealed inside arm. Can be made very short to plug into a flush mount connector on the exterior of the vehicle or to pass just inside the vehicle skin. Can be made longer to be run all the way to the control switch.
2. Intermediate Harness- Joins the arm harness to the switch harness. Advantageous because it can be run before installation of the arm on the vehicle assembly line. Also allows arm to be removed from bus by disconnecting a connector instead of cutting a longer wire. More commonly used on passenger side.
3. Switch Harness- Attached to control switch. Often integrates heater control switch. Has leads for power and mirror heater circuits. Usually very short in length.

Mirror Systems Testing For Compliance to FMVSS-111

Our AccuStyle® and EuroStyle® rearview mirror systems and front cross view mirror systems (Eye-Max® LP, HD®, Hawk-Eye®), have been certified for compliance to FMVSS-111 by all the major school bus body builders. Companies including IC Corporation, Thomas Built Buses, Blue-Bird, Collins and Girardin, have shown time and again that Rosco mirrors not only meet, but exceed the requirements of FMVSS-111. However, we continue to test and improve our mirrors to make sure that they cover areas around the bus, beyond the requirements of FMVSS-111. We can not rest in this regard, because we know that the safety of our children depends on it.



Proper School Bus Mirror Adjustment

You know your buses are being manufactured with FMVSS-111 compliant mirrors, but how do you know that your mirrors are being properly adjusted? Can you be sure that your drivers are seeing the blind areas around the bus? Are there blind areas around the bus beyond the FMVSS-111 mandated coverage? If these questions are bothering you, then you need to see "Field of Vision", the first video which teaches you how to keep your mirrors properly adjusted at all times. This free video guideline is a perfect addition to your driver training program. It not only shows how to keep your mirrors adjusted in compliance with FMVSS-111, but also how to see blind areas beyond FMVSS-111 regulations.

Email us for your free copy: info@roscomirrors.com



FIELD OF VISION
A video guide to proper school bus mirror adjustment in accordance with FMVSS-111

OTHER INNOVATIVE ROSCO

Fleet Safety Management Continuous Video & Event Recording,

Rosco's Dual-Vision™ XC is the only windshield based camera that offers all the benefits of event based recording with the added benefit of continuous recording. With Dual-Vision™ XC in your fleet has the ability to reduce your liability and insurance premiums. Some Dual-Vision™ XC features include:

Some Dual-Vision™ XC features include:

- No Monthly Fees
- Up to 160 hours of continuous video on a 32GB SD card
- Tamper proof
- G-Force recognition
- Vehicle speed
- Integrated post route GPS tracking
- Driver panic button
- 24 hour surveillance timer audio, night vision
- Up to 6 camera views
- Wi-Fi download capability and much, much more.

Dual-Vision™ XC 2 + 1



DV231



Maximize your data's potential with our DV-Pro® fleet database management system. This software was developed specifically for organizing information captured by Dual-Vision™ XC recording devices. DV-Pro® makes it fast and easy to view or transfer footage, archive or discard content and compile reports or email files. DV-Pro® driver tools give greater control of information generated by high capacity Dual-Vision™ XC recorders. You can conduct searches based on detailed criteria and quickly make note of key events such as speed overages.

VISION PRODUCTS

Backup Safety Products, Cameras & Monitors

Safety Starts With a Rearview Camera

We cover all the safety angles so your vehicle can backup safely. Replace a standard rearview mirror with one that displays an LCD monitor as soon as the vehicle is shifted into reverse. Or install a rearview mirror backup camera that delivers an unobstructed view of what's behind the vehicle even when it's dark outside. Reduce the risks of moving in reverse. Drivers will be able to maneuver easily in reverse with one of our backup camera kits.



STSK7965
COMPLETE CAMERA KIT



MOR-Vision Mirror/Monitor Backup Camera Kits



Rosco Vision Systems introduces a revolutionary new backup camera system (STSK6630) for large school buses and vehicles. This new system utilizes an interior 6" x 30" rearview mirror (STSM630) to display a 7" LCD monitor when the vehicle is in reverse operation. This monitor allows the driver to see behind the vehicle, and once the vehicle is shifted to all other modes of operation a normal full mirror view reappears.

The MOR-Vision series also includes our STSK5530 kit and STSK1030 kit for small and large buses. Buses equipped with MOR-Vision have options for multiple cameras and automatic monitor view changes based on operational conditions of the school bus. With two camera inputs, the MOR-Vision systems allow for a second camera to be installed for increased visibility and security. Upgrade the MOR-Vision Mirror/Monitor Backup Camera System with a second interior or exterior camera.



STSK1030 Mirror/Monitor 10" x 30" Backup Camera Kit
STSM1030 Monitor, STSC109B Camera, and STSH341 Harness



STSK6630 Mirror/Monitor 6" x 30" Backup Camera Kit
STSM630 Monitor, STSC109B Camera, and STSH341 Harness



STSK5530 Mirror/Monitor 6" x 16" Backup Camera Kit
STSM530 Monitor, STSC109B Camera, and STSH341 Harness



STSK4530 Mirror/Monitor 6" x 16" Backup Camera Kit
STSM230 Monitor, STSC130 Camera, and STSH330 Harness



Rosco was established in 1907. For over a century, our goals have remained the same: We are committed to producing the highest quality automotive products and providing the superior service our customers have grown to expect.

Today, we supply our products to every school bus manufacturer in North America. Our products are designed and built in the USA. Our staff has grown to over two hundred people in facilities totaling over one hundred thousand square feet.

As we move forward we have set our goals even higher. We are now certified to ISO-9001:2008. Our focus on Total Quality Management and continuous improvement will keep our product quality at levels our customers demand.

We will strive to improve our customer service through online and other electronic resources. We will continue to develop newer and better products to serve the ever-changing needs of the marketplace of tomorrow.



A Century of Automotive Vision Safety

90-21 144th Place, Jamaica, New York 11435

TEL (800) 227-2095 • FAX (718) 297-0323

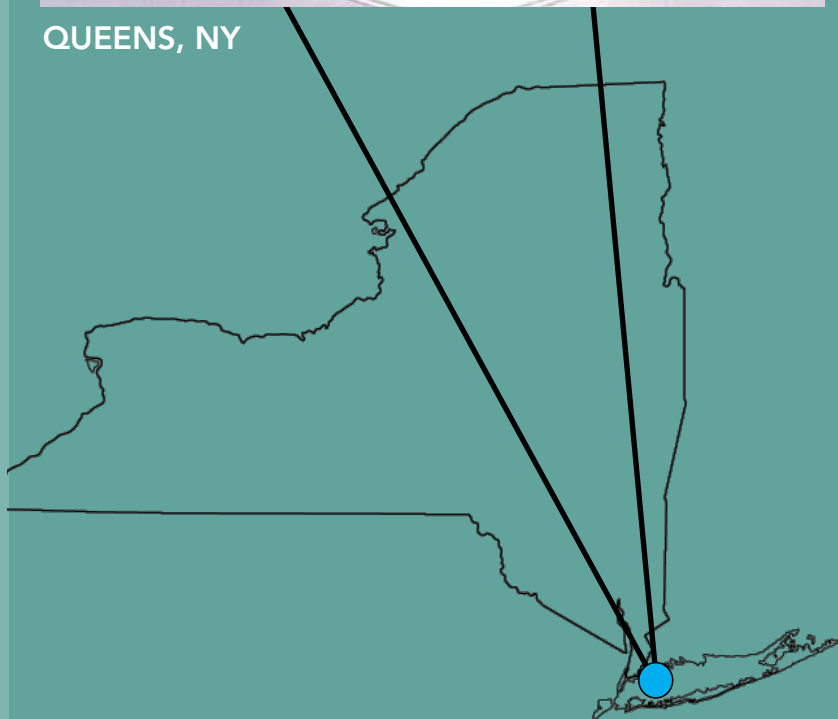
Info@Roscomirrors.com

www.roscomirrors.com www.roscovision.com

Cat. No. 081414



QUEENS, NY



NEW YORK SINCE 1907

LEADING THE INDUSTRY IN REAR VISION SAFETY


STSK4750B KIT COMPONENTS:

MONITOR: STSM244

CAMERA: STSC130B

HARNESSES: STSH349 (49FT BLACK), STSH130 (ADAPTER HARNESS)

Forest River, Inc. bus manufacturing companies will be the industry's first to offer a rear backup safety camera as standard equipment on every bus in 2019... Setting the safety tone and trend in the commercial and school bus market.

Forest River's hard stance on safety with the new 2019 rear backup safety program has selected Rosco Vision Systems in NY as the manufacturers of the STSK4750B backup camera system.


STSM244 MONITOR SPECS

SCREEN SIZE	7"
RESOLUTION	800*480 pixels
MONITOR BRIGHTNESS	700cd/m2
NUMBER OF CAMERA INPUTS	1
INPUT FORMAT	13-pin
VIEWING ANGLES	L/75°, R/75°, UP/60°, DOWN/60°
SHOCK RATING	2G
VIBRATION RATING	6G
POWER SUPPLY	12 ~ 32 VDC
OPERATING TEMPERATURE RANGE	-4°F to 158°F -20°C to 70°C

STSC130B CAMERA SPECS

TV LINES	420 TVL
FIELD OF VIEW (DIAGONAL)	150°
MINIMUM ILLUMINATION	0.2 LUX
DUST/WATER RATING	IP69K
POWER SUPPLY	12 Vdc
OPERATING TEMPERATURE	-22°F to 140°F -30°C TO 65°C



LED STROBE LIGHT

ENHANCED BUS VISIBILITY

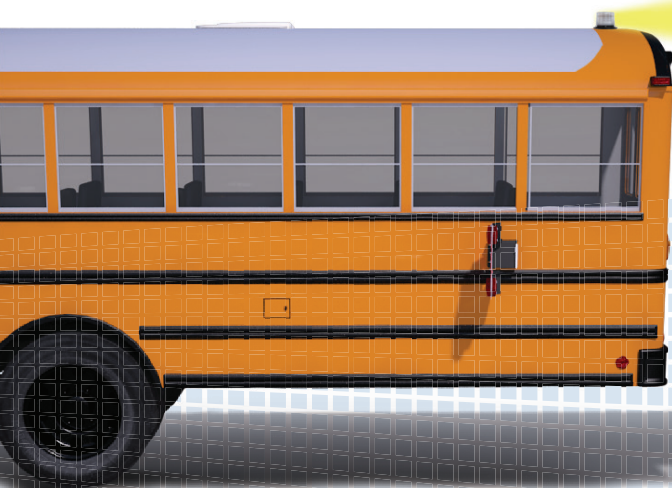
**SPECIALTY
MANUFACTURING**

A Safe Fleet Brand



4" model shown

Low-profile model with
branch guard provided for
WV DOT.



**Provides more
down angle light
to gain attention
of pedestrians and
motorists**



SAFETY

Significantly improves
vehicle visibility in any
light conditions



EXTREME TEMP

Certified operation
between -30° and 130°



MAINTENANCE

LED tower and
circuit board are
field replaceable for
simplified maintenance



MOISTURE

Water resistant design
exceeds SAE J845/575



DOWN BEAM

Optical design provides more
down angle light to gain
attention of pedestrians and
motorists



SHOCK AND VIBRATION

Rough roads, potholes, and day-
to-day jarring are no match for
the solid state electronics. Tested
to SAE J845/575 standards



ADAPTABLE

Composite base with
rubber gasket adapts to
various roof surfaces



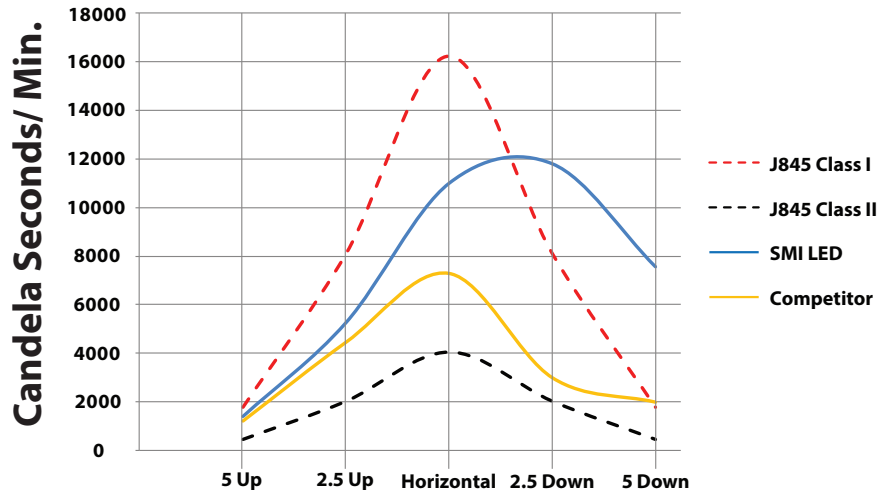
WARRANTY

5 year

- **Exceeds SAE J845 Class II rating**
- **Composite base with rubber gasket adapts to various mounting surfaces**
- **Same hole pattern as Specialty Manufacturing's 515 model**

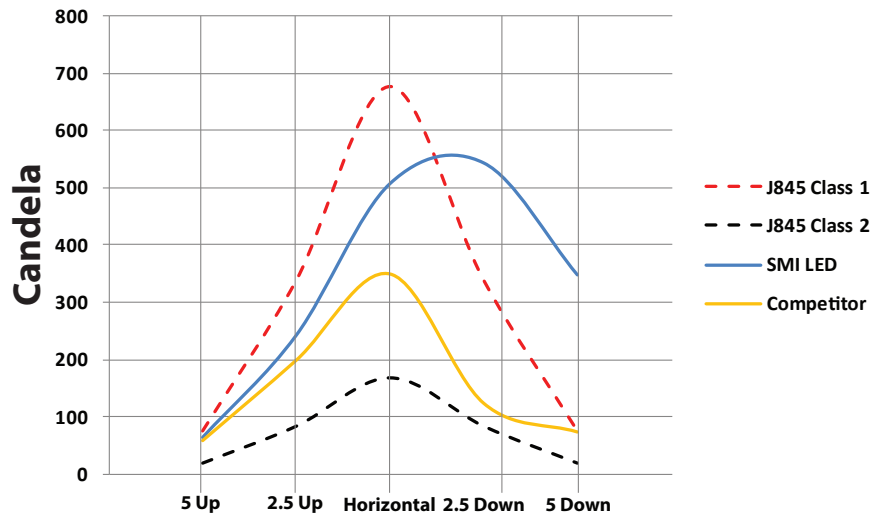
THE SPECIALTY DIFFERENCE

OPTICAL POWER



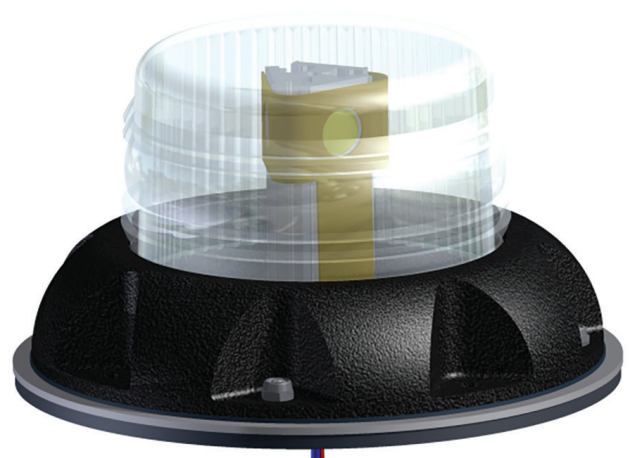
Optical Power is part of SAE J845. The purpose of this graph is to show the total energy emitted in a given length of time.

PEAK INTENSITY



This graph illustrates how the Specialty LED Strobe outperforms the leading competitor + SAE J845 requirements.

The optical design of the Specialty strobe provides *4x's more down angle light than the competitive solution* which enhances bus visibility to motorists and pedestrians. It provides *nearly 5x's more down angle light than SAE J845 requirements for Class II strobes.*



Coming soon...the low profile LED strobe!

**FMVSS/CMVSS Compliance Summary 2021****Commercial and MFSAB**

This vehicle conforms to all applicable U.S Federal Motor Vehicle Safety Standards and Canadian Motor Vehicle Safety Standards in effect on the date of manufacture		
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 2021****Commercial and MFSAB**

This vehicle conforms to all applicable U.S Federal Motor Vehicle Safety Standards and Canadian Motor Vehicle Safety Standards in effect on the date of manufacture		
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 2021****Commercial and MFSAB**

This vehicle conforms to all applicable U.S Federal Motor Vehicle Safety Standards and Canadian Motor Vehicle Safety Standards in effect on the date of manufacture

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

Signed: 

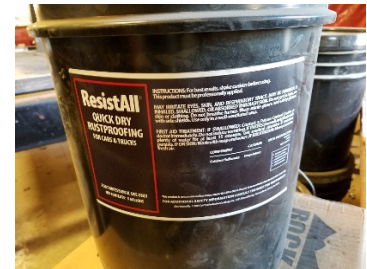
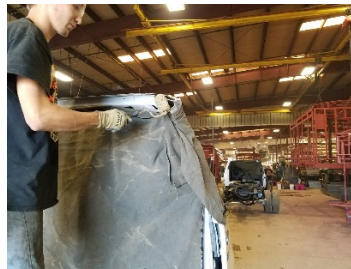
Date: 1/04/2021

Title: Compliance and Customer Service Manger

Rev. A		No. ST-32-01-0006-16
Implementation: 7/11/2016	Unit Corrosion Prevention Process	Written by: Juan Machuca
Models Affected:	All models	
Tools Necessary:		Total Pages: 01

Chassis Prep:

1. StarTrans Bus must comply with OEM requirements and/or guidelines
 - a. QVM E1002 requirement states – Protect all body panel drilled or punched holes or cutouts from corrosion with a product containing zinc-phosphate or barium-sulfate as the active ingredient. Zinc coating materials should contain a minimum of 92 percent zinc. Two part epoxy coatings are also effective.
 - b. StarTrans uses an approved QVM corrosion inhibitor with a calcium sulfonate active ingredient.



2. Aluminized cages must have all welds sprayed with a primer that entirely covers all welds of the completed cage.
3. Barrier tape must be applied to the exterior of all cages to separate dissimilar metals from touching during the build process to prevent corrosion from occurring.



4. All exposed electrical grounds must be sprayed with a corrosion inhibitor.
5. StarTrans inspection department must thoroughly inspect grounds, cages, welds and barrier tape to ensure all areas of anti-corrosion applications are done properly or repaired appropriately.



Rev.	Reason for Revision	Approved By	Revised



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, 2367 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 three (3) years from the date of first delivery or 36,000 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 100,000 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 MAGNUSEN 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.
2367 Century Drive
Goshen, IN 46528
Phone: 877.258.1391
Fax: 574.970.6815

Using AL712S-4C for
WVDOT

Introducing **TITAN**

BY **SURE-LOK**®



The newest high-performance securement system from
the name you count on for quality and service above all.





SURE

Welcome

Sure-Lok has a long and much-heralded history of making transportation safer for passengers with special needs. And, that's something that we're very proud of.

Sure-Lok has pioneered innovations that have now become industry standards; and was the first to develop and manufacture L Track and A Track Securement Systems. TITAN continues this tradition – and that's good news for passengers and operators alike. TITAN's auto-tension, auto-lock retractor system allows operators to safely secure a wheelchair in seconds – with only one hand. TITAN by Sure-Lok meets the special needs of your passengers. And your drivers.

THINK BLUE...THINK TITAN.

TITAN

BY **SURE-LOK** 

Designed to inspire safety.

THINK TITAN FOR

- PASSENGER SAFETY • OPERATOR CONVENIENCE
- YOUR PEACE OF MIND

Sure-Lok is committed to providing the safest and most secure wheelchair tie-downs and occupant restraint systems available today. And, TITAN delivers.

- TITAN delivers a securement system offering safety and increased speed of operation.
- TITAN delivers an auto-tensioning, auto-locking retractor system that allows for one-handed operation.
- TITAN delivers a “locked” indicator tag.
- TITAN delivers a low profile bracket and a sleeker, cleaner retractor case with a stud fitting to attach the occupant restraint system.
- TITAN delivers an S-Hook configuration that keeps webbing flat and untwisted when attached to the wheelchair.
- TITAN delivers a 3 year warranty and warranty card program.
- TITAN delivers a comprehensive specification and training program.
- TITAN delivers a superior securement system at a competitive price.

And, that's just the beginning.

TITAN's comprehensive kits provide what you need to equip your vehicles with everything required to deliver the safest ride possible to your passengers. Supported by Sure-Lok's broad product offering, a firm commitment to meet and exceed all applicable safety standards and a team that is always available to assist – TITAN delivers the optimum in passenger securement and protection.

When its time to specify high performance securement systems...

THINK BLUE...THINK TITAN.



SURE-LOCK®

The AL700 Retractor systems are designed to meet or exceed the following requirements:

- 30mph/20g Impact Test Criteria per SAE J2249
- 30mph/20g Impact Test Criteria per Canadian Z605 Standard
- 30mph/20g Impact Test Criteria per National Standards for School Buses
- 30mph/20g Impact Test Criteria per ISO 10542 Standard
- 49 CFR Part 38 Americans with Disabilities Act (ADA)
- 49 CFR Part 571.222 (FMVSS 222) School Bus Passenger Seating and Crash Protection
- FMVSS 302 Flammability Test

Certificates of conformance available upon request.

Kit No. AL712S-4C

Auto-tensioning, auto-locking retractor kit complete with S-Hooks and occupant restraint system. Kit includes:



AL700855S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, RH.

AL700907S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, LH.

AL700771 (1)

Fixed-point mount occupant restraint retractor with height adjuster and triangular fitting.

AL700771-1 (1)

Occupant restraint buckle connector assembly with triangular fitting.

Kit No. AL712-4C

Auto-tensioning, auto-locking retractor kit complete with buckle, buckle connector and occupant restraint system. Kit includes:



AL700855 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, RH.

AL700907 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, LH.

AL700771 (1)

Fixed-point mount occupant restraint retractor with height adjuster and triangular fitting.

AL700771-1 (1)

Occupant restraint buckle connector assembly with triangular fitting.

Kit No. AL727S-4C

Auto-tensioning, auto-locking retractor kit complete with S-Hooks. Kit includes:



AL700855S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, RH.

AL700907S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, LH.

Kit No. AL727-4C

Auto-tensioning, auto-locking retractor kit complete with buckle and buckle connector. Kit includes:



AL700855 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, RH.

AL700907 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, LH.

Kit No. AL715S-4C

Auto-tensioning, auto-locking retractor kit complete with S-Hooks and occupant restraint system. Kit includes:



AL700857S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, RH.



AL700925S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, LH.



AL700771 (1)

Fixed-point mount occupant restraint retractor with height adjuster and triangular fitting.



AL700771-1 (1)

Occupant restraint buckle connector assembly with triangular fitting.

Kit No. AL715-4C

Auto-tensioning, auto-locking retractor kit complete with buckle, buckle connector and occupant restraint system. Kit includes:



AL700857 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, RH.



AL700925 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, LH.



AL700771 (1)

Fixed-point mount occupant restraint retractor with height adjuster and triangular fitting.



AL700771-1 (1)

Occupant restraint buckle connector assembly with triangular fitting.

Kit No. AL728S-4C

Auto-tensioning, auto-locking retractor kit complete with S-Hooks. Kit includes:



AL700857S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, RH.



AL700925S (2)

Auto-tensioning retractor assembly with stud fitting and S-Hook, LH.

Kit No. AL728-4C

Auto-tensioning, auto-locking retractor kit complete with buckle and buckle connector. Kit includes:



AL700857 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, RH.



AL700925 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, LH.



Our philosophy is inspired by safety. We are committed to the highest quality standards in the industry.

We provide the widest selection of wheelchair securement systems available today, allowing you to choose the system that suits you best.



Kit No. AL760S-4C

Auto-tensioning, auto-locking retractor kit complete with S-Hooks, occupant restraint system and Solo floor anchors. Kit includes:



AL700944S (2)

Auto-tensioning retractor assembly with occupant stud fitting and S-Hook, RH.

AL700945S (2)

Auto-tensioning retractor assembly with occupant stud fitting and S-Hook, LH.

AL700771 (1)

Fixed-point mount occupant restraint retractor with height adjuster and triangular fitting.

AL700771-1 (1)

Occupant restraint buckle connector assembly with triangular fitting.



FE200922 (4)

Solo floor anchor, backing plate, lock washer and nut.

Kit No. AL760-4C

Auto-tensioning, auto-locking retractor kit complete with buckle and buckle connector, occupant restraint system and Solo floor anchors. Kit includes:



AL700944 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, RH.

AL700945 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, LH.

AL700771 (1)

Fixed-point mount occupant restraint retractor with height adjuster and triangular fitting.

AL700771-1 (1)

Occupant restraint buckle connector assembly with triangular fitting.



FE200922 (4)

Solo floor anchor, backing plate, lock washer and nut.

Kit No. AL761S-4C

Auto-tensioning, auto-locking retractor kit complete with S-Hooks and Solo floor anchors. Kit includes:



AL700944S (2)

Auto-tensioning retractor assembly with occupant stud fitting and S-Hook, RH.

AL700945S (2)

Auto-tensioning retractor assembly with occupant stud fitting and S-Hook, LH.



FE200922 (4)

Solo floor anchor, backing plate, lock washer and nut.

Kit No. AL761-4C

Auto-tensioning, auto-locking retractor kit complete with buckle and buckle connector and Solo floor anchors. Kit includes:



AL700944 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, RH.

AL700945 (2)

Auto-tensioning retractor assembly with stud fitting and buckle & buckle connector, LH.



FE200922 (4)

Solo floor anchor, backing plate, lock washer and nut.

Occupant Restraint Systems

Sure-Lok Occupant Restraint Systems meet all applicable requirements of the FMVSS and have successfully passed the stringent 30mph/20g Impact Test Criteria when used in conjunction with the AL700 Series Securement Systems. For a complete list of standards compliance and other lap and shoulder belt options, please refer to our current full line catalog.



AL700727HA (1)

Retractable integrated combination belt with height adjuster and triangular fittings. Fittings attach to stud on rear retractor assembly. Includes AL700727-5 connector belt assembly.

AL700727

Retractable integrated combination belt with triangular fittings. Fittings attach to stud on rear retractor assembly. Includes AL700727-5 connector belt assembly.

AL700856HA

Retractable integrated combination belt with height adjuster and triangular fittings. Fittings attach to stud on rear retractor assembly. Includes AL700727-5 connector belt assembly.

AL700856

Retractable integrated combination belt with triangular fittings. Fittings attach to stud on rear retractor assembly. Includes AL700727-5 connector belt assembly.

AL700856HA and AL700856 are designed to allow the retractor to be installed on a sidewall rail, which is typically mounted 10 inches above the vehicle floor.



AL700868-2

Dual retractable integrated combination belt with triangular fittings. Fittings attach to stud on rear retractor assembly. Includes AL700727-5 connector belt assembly. The height of the belt can be adjusted for a perfect fit on the occupant simply by pushing a release button of the upper retractor. The belt can be moved front to back along the vehicle sidewall, without the use of tools, by simply removing the quick release L fittings from the vehicle L tracks.

Integrated Lap Belt



AL700842

Integrated lap belt assembly, 96" long with triangular fittings. Fittings attach to stud on rear retractor assembly.

TITAN

BY SURE-LOK 

THINK BLUE...THINK TITAN.



TITAN

BY **SURE-LOK** 

www.sure-lok.com

2501 Baglyos Circle, Bethlehem, PA 18020-8027
Toll free 866-SURE-LOK (787-3565) • Toll free fax 866-TIE-DOWN (843-3696)

In Canada:
Kinedyne Canada Limited
120 Commander Boulevard, Toronto, ON M1S 3H7
Toll free 800-268-3530 • Toll free fax 800-663-7318

General Pricing Information

- 1 **FREIGHT POLICY:** All prices are F.O.B. Sure-Lok shipping point.
- 2 **PAYMENT TERMS:** Net thirty (30) days from the date on invoice, on approved credit.
- 3 **MINIMUM INVOICE CHARGE:** \$150.00
- 4 **PRICES:** Prices are in U.S.A. dollars and are subject to change without notice. Possession of pricing information does not guarantee purchaser the prices indicated therein. Prices for cataloged items not shown in this pricing information should be reconfirmed by customer prior to ordering. Prices do not include applicable state or local taxes.
- 5 **RETURNS:** No material may be returned without the written consent of Sure-Lok. A twenty (20) percent restocking charge and full outgoing and incoming freight charges will apply to material accepted for return.

Limited Warranty

AL700 Titan Series Systems are warranted for a period of three (3) years from date of manufacture to be free from defects in material or workmanship. All other Sure-Lok products are warranted for a period of one (1) year from date of manufacture to be free from defects in material or workmanship. Any products found to be defective in material or workmanship within the warranty period will be repaired or replaced.

This warranty does not extend to any product which has been subjected to misuse, abuse, accident, negligence, exposure to the elements or chemicals, alteration or unauthorized repair.

Upon notification that a product has been found to be defective, Sure-Lok will advise to which location the product should be returned via freight prepaid.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL THE COMPANY BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR LOSS OF VEHICLE, CARGO OR PROFITS.

Customer Orders

Phone Toll Free: 866-SURE-LOK (866-787-3565)

Fax Toll Free: 866-TIE-DOWN (866-843-3696)

E-Mail: orders@sure-lok.com



2501 Baglyos Circle Bethlehem, PA 18020
Phone: (610) 814-0300 Fax: (610) 814-0644
www.sure-lok.com



LED SIGNAGE AND COMMUNICATION

- Signs and corresponding programming are capable of displaying different messages simultaneously. Messages may include current destination, route number, or next stop.
- The characters together are capable of displaying a constant-on single line message, and of flashing a multi-line message with a complete blackout to mark the end of each line of the message. The time of display of each line of a multi-line message is adjustable and the ability to display various symbols, as required
- All signs feature an auto-dimming for varying light conditions, and must include self-diagnostic capabilities for errors and outages.
- Fonts and color must be ADA compliant (Amber exterior) standard color
- Sign and hardware must include a 10 year warranty (all parts)
- All signage is ADA compliant and meet Buy America standards
- Lifetime sign programming and service assistance

PART 1 – OPERATOR CONTROL UNIT (OCU)

- In the absence of a single mobile data terminal (MDT), all LED signs (including destination, route, and interior information displays) is controlled via a single Operator Control Unit (OCU) capable of operating up to seven (7) on-board signs simultaneously. This OCU will be located within convenient reach and view of the seated driver so that all buttons are accessible. The OCU is located so that passengers cannot easily tamper with the settings.
- The system control console contains a vacuum fluorescent or LCD display. The system control console contains an audio annunciator that beeps to alert the operator to view the display for a message, or beeps indicating that a key is depressed. The system control console will continuously display the complete message associated with the selected destination code up to 15 characters. Entire sign system operates on 12VDC ignition power. 24V is available upon request.
- System memory allows for a minimum of 1,000 message lines, with the ability to scroll, flash, or stack multi-line messages.
- OCU has an optional input and firmware support for optional emergency switch the driver can push, capable of displaying “EMERGENCY” or “DIAL 911” on all exterior signs without direct OCU interaction. The emergency message can be cancelled by activating the switch a second time. The emergency message displays on the exterior of the bus only. The OCU does not display the emergency message.
- Programming software and support is included with each sign system. Uploading new programming to the OCU may be done via standard USB drive. Programming interface operates on Windows based PC and will allow for user modification of destination and message lists.
- OCU is configured with open J1708 firmware along with the availability of the appropriate communication connectors to allow software providers to push and trigger destination message changes through the OCU. We will provide API and firmware for software integration for future projects, at the TA’s discretion. This specific OCU must be specified and required by user.

PART 2 - DESTINATION SIGNS

Transign Model LED Destinator® Full Amber LED:

12 VDC Front and Side Electronic Destination Sign System. Front and side window with automatic brightness control. Signs can display stationary, scrolling, or flashing messages. Signage includes programming resources to be provided to the agency, one unit per sign kit. Sign system provided has a minimum of 10 year warranty period. Operator control unit is programmable and uses USB port technologies to accept thumb drives.

Front LED Destination Sign:

- Front destination sign is Amber LED with a minimum LED display of 4.75”(H) x 44” (W)- 12 pixels high x 112 pixels wide, 1,344 pixels, minimum viewing distance of up to 500’.
- Each LED’s has a diameter of 10mm with a 10mm pitch.
- The destination message is readable by a person with 20/20 vision from a distance of 250 feet.
- The sign has an equal readability at 65 degrees on either side of the line perpendicular to the center of the mean plane of the display.
- The entire display area of all signs is clearly visible and readable both in direct sunlight and at night.
- Front sign is capable of displaying scrolling or flash text, with a fixed left margin to display route number.
- Front sign is installed high in the windshield, or above the windshield enclosed in a suitable compartment.

Curb-Side LED Destination Sign:

- Side destination sign are Amber LED with a minimum LED display of 4.75”(H) x 31.50” (W)- 12 pixels high x 80 pixels wide, 960 pixels, minimum viewing distance of 250’.
- Each LED’s has a minimum size diameter of 10mm with a 10mm pitch.
- The destination message is easily read from the sidewalk level. The entire display area of all signs is clearly visible and readable both in direct sunlight and at night.
- Side sign is capable of displaying scrolling text, and may display similar or different messages from the front.
- Side sign is located in a passenger window behind the front passenger entrance door. Sign is mounted in top portion of side window.

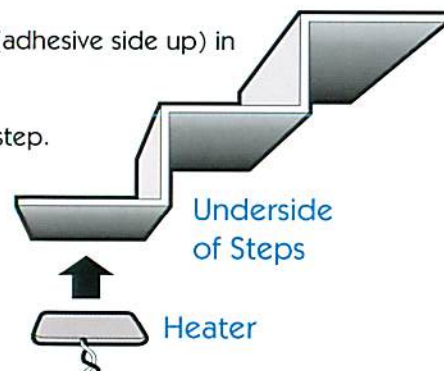
ULTRAHEAT, INC

Your First Step in Safety

Step Heater Models
SH267, SH267a
SH267b, SH 267c

INSTALLATION INSTRUCTIONS

- The SH-267 Step Heater is installed on the bottom side of the entrance step.
- The surface must be clean and dry prior to installation of the heater. Clean the surface where the heater is to be placed with Isopropyl Alcohol just before application of the heater. (Do not use Solvent based cleaners!) Make sure to allow the alcohol to dry completely before placing the heater on the step.
- Peel the release paper from the back of the heater and place it (adhesive side up) in the center of the bottom side of the bottom entrance step.
- Make sure that all parts of the heater contact the surface of the step.
- Wire leads should be connected to a 12 Volt power source with crimp type connectors.
- The heater's power circuit must have an in-line fuse or circuit breaker. Ultra Heat recommends the use of an on/off switch with the use of the SH-267 Step Heater.
- Automotive undercoating can be put on the SH-267 after installation without any adverse effects.

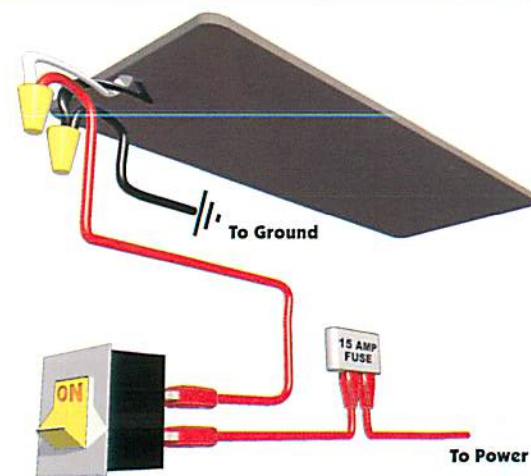


HEATER SPECIFICATIONS

Part #	Voltage	Current Draw	Power Generated	Heat Generated in BTU/HR	Lead	Thermostat
SH-267	13.5 Volts	8.39 Amps	113.27 Watts	386.61	Long	No
SH-267a	13.5 Volts	8.39 Amps	113.27 Watts	386.61	Standard	Yes
SH-267b	13.5 Volts	8.39 Amps	113.27 Watts	386.61	Standard	No
SH-267c	13.5 Volts	8.39 Amps	113.27 Watts	386.61	Long	Yes

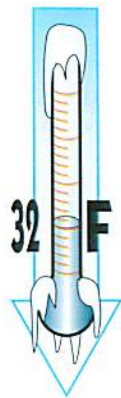
Typical Electrical Hook Up

If needed, the solid state heater may be controlled with a thermostat. The Heater is easily installed on the underside of the step, keeping it hidden from sight, and saving it from the wear and tear of years of foot traffic. It is the safest and easiest to use heater on the market.



Talk to an UltraHeat Sales Representative today! Call (574) 522-6594, or Fax us at : (574) 522-1967 or email via: info@ultraheat.com

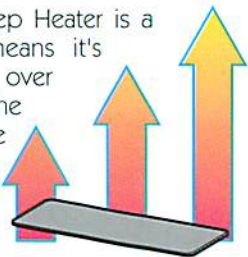
How the UHI Step Heater Works...



Before the Temperature drops to 32F, activate the heater by simply flipping the switch to "ON". The heater goes to work immediately, warming the step so that even when the temperature falls below freezing, moisture that gathers on the step will be prevented from turning to ice!

With an optional thermostat, the heater automatically turns on at 44F, and turns off at 64F.

UltraHeat's Step Heater is a full contact Heater: that means it's designed to spread it's heat over the largest possible area. The Step Heater is placed on the under side of the step so it is not subject to the wear and tear of passenger traffic.



UltraHeat Heaters are Easy to Install & Use

About Ultra Heat Inc.

ULTRAHEAT, INC



Step Heater User Manual

UltraHeat Inc. has been in business since 1991. From the beginning, we saw the importance of year 'round Bus & Van safety. To help manufacturers, we build reliable heaters for the Bus Industry.

Using an UltraHeat Step Heater can greatly reduce the likelihood of winter-time injuries to your passengers or employees, helping avoid employee time-off or possible legal actions due to injury.

Here are some of the Bus Manufacturers using the Ultra-Heat Step Heater:

O.E.M. Bus Companies which rely on UHI Heaters.

- El Dorado National • Supreme Corporation
- Glaval Bus • Starcraft Automobile
- Coach & Equipment Manufacturing Corp.
- Minnesota Body & Equipment Co.
- Champion Coach • Goshen Coach

1314 Perkins St., Elkhart, IN 46516

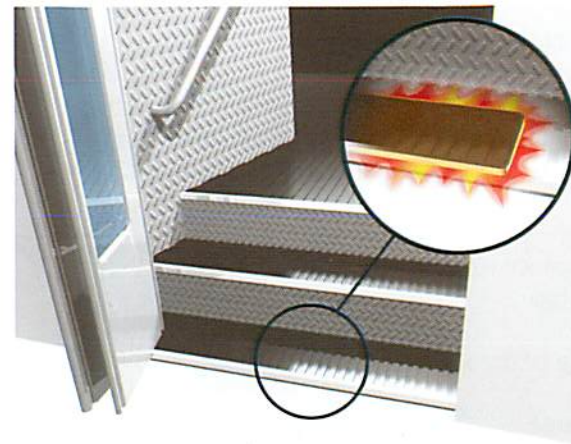
Contact us at (574) 522-6594

Fax: (574) 522-1967

email: info@ultraheat.com

www.ultraheat.com

Protect Passengers and Employees with a UHI Step Heater...



...Keeps Steps in Buses and
Cargo Vans from Icing Up in Winter...

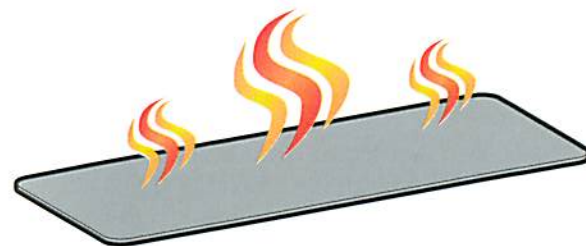
ULTRAHEAT, INC

www.ultraheat.com

Why Protect your Steps from Freezing?

It's almost a silly question isn't it? When snow and water are carried onto steps in cold temperatures, they freeze to ice! This is a potential hazard that may cause serious injury, especially to children of all ages and older adults.

The UltraHeat Step Heater will protect your passengers (and employees!) from slippery ice build-ups. The Step Heater safely heats the steps so that when they are wet with slush and water, they **WILL NOT FREEZE.**



UltraHeat is your First Step to Safety!

UNDERCOAT PROCESS INFORMATION

Forest River Bus includes an undercoat application with every vehicle produced. The undercoating protects the unit's most exposed areas from moisture, dirt, grime, salt and other weather-related elements. Trained technicians within two undercoating bays apply the undercoating.

Each vehicle is raised using a drive-on ramp lift system in one of the two undercoating bays. Various areas of the body conversion are masked off including, but not limited to: fuel fills, mud flaps, wheel wells, etc. A rust preventative is also added to the bottom edge of the metal skirts if applicable. A spray foam is applied for additional noise reduction as well as body seam sealing. The underbody is then sprayed with a tough, pliable, corrosion protectant material, which incorporates a sound-deadening property at a pressure of 40 psi. The application runs between 45 minutes to 1.5 hours pending vehicle length.

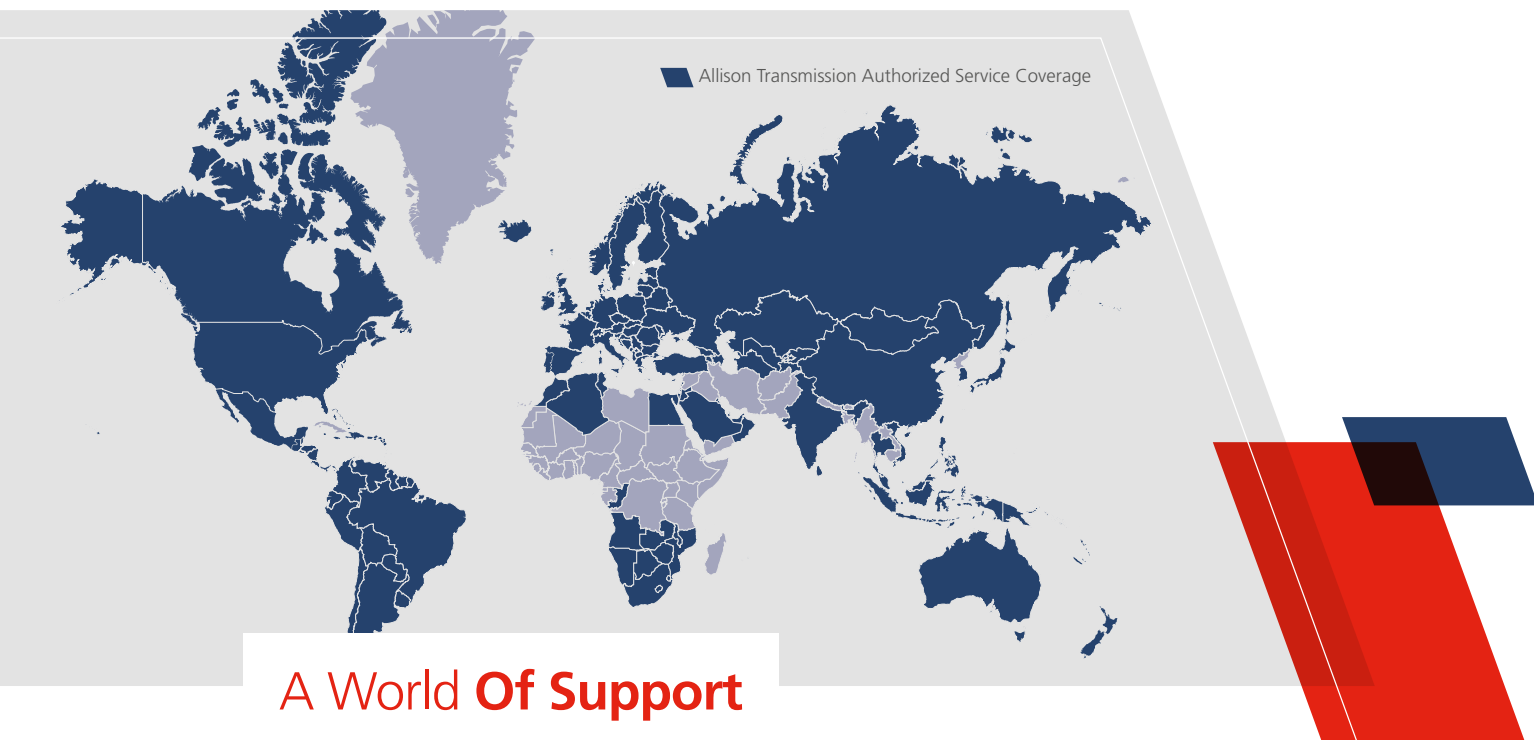
Forest River Bus follows the strict guidelines established by QVM. No undercoating is sprayed within 12" of the exhaust system or on fuel tank(s), brake lines, AC/heater hoses, heat shield, wire harnesses, driveshaft(s), rear suspension or OEM frame rail.

Undercoating data is available upon request.



FOREST RIVER BUS

2367 Century Drive • Goshen, Indiana 46528 • 800.348.7440 • www.forestriverinc.com



A World Of Support

From our headquarters in Indianapolis, Indiana, USA, to our manufacturing plants in Hungary and India, to approximately 1,400 Allison Authorized Distributors and Dealers around the globe, you are never far from the products, training, service and support you demand.

Our support starts from the moment an Allison transmission is specified. We work with you to ensure that the model and ratings fit your engine to create a tailored package of powerful performance and reliable efficiency. When you need parts or service, you can count on global access to factory-trained specialists and Allison Genuine Parts™.

*One Allison Way
Indianapolis, Indiana, USA 46222-3271*

*Information or specifications subject to
change without notice or obligation.*

allisontransmission.com

*SA7469EN (2017/08)
ISO/QS 9000 and ISO 14001 Certified*

*© 2017 Allison Transmission Inc.
All Rights Reserved.*



NEW PRODUCT WARRANTY



**PARTICIPATING OEM SALES
DISTRIBUTOR SALES**

LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS USED IN SHUTTLE & OTHER BUS APPLICATIONS—EXCEPT TRANSIT, SCHOOL BUS, INTERCITY BUS, or MOTORHOME

Allison Transmission, Inc. will provide for repairs or replacement, at its option, during the warranty period of each new Allison transmission listed below that is installed in a Bus, other than School Bus, Transit Bus, Intercity Bus, or Motorhome in accordance with the following terms, conditions, and limitations.

WHAT IS COVERED

- **WARRANTY APPLIES** — This warranty is for new Allison transmission models listed below installed in a Bus, other than School Bus, Transit Bus, Intercity Bus, or Motorhome and is provided to the original and any subsequent owner(s) of the vehicle during the warranty period.
- **REPAIRS COVERED** — The warranty covers repairs or replacement, at Allison Transmission's option, to correct any transmission malfunction resulting from defects in material or workmanship occurring during the warranty period. Needed repairs or replacements will be performed using the method Allison Transmission determines most appropriate under the circumstances.
- **TOWING** — Towing is covered to the nearest Allison Transmission Distributor or authorized Dealer only when necessary to prevent further damage to your transmission.
- **PAYMENT TERMS** — Warranty repairs, including parts and labor, will be covered per the schedule shown in the chart contained in section "APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE."
- **OBTAINING REPAIRS** — To obtain warranty repairs, take the vehicle to any Allison Transmission Distributor or authorized Dealer within a reasonable amount of time and request the needed repairs. A reasonable amount of time must be allowed for the Distributor or Dealer to perform necessary repairs.
- **TRANSMISSION REMOVAL AND REINSTALLATION** — Labor costs for the removal and reinstallation of the transmission, when necessary to make a warranty repair, are covered by this warranty.
- **WARRANTY PERIOD** — The warranty period for all coverages shall begin on the date the transmission is delivered to the first retail purchaser, with the following exception:

Demonstration Service—A transmission in a new truck or bus may be demonstrated to a total of 5000 miles (8000 kilometers). If the vehicle is within this limit when sold to a retail purchaser, the warranty start date is the date of purchase. Normal warranty services are applicable to the demonstrating Dealer. Should the truck or bus be sold to a retail purchaser after these limits are reached, the warranty period will begin on the date the vehicle was first placed in demonstration service and the purchaser will be entitled to the remaining warranty.

APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE

APPLICABLE MODELS	WARRANTY LIMITATIONS (Whichever occurs first)		ADJUSTMENT CHARGE TO BE PAID BY THE CUSTOMER	
	Months	Transmission Miles Or Kilometers	Parts	Labor
B 210, B 220, B 300, B 400, B 500	0-24	No Limit	No Charge	No Charge
1000 Series, 2000 Series, 2400 Series	0-36	No Limit	No Charge	No Charge
1000 PTS, 2100 PTS, 2200 PTS, 2350 PTS, 2500 PTS, 2550 PTS, 3000 PTS	0-36*	0-100,000 m 0-160 000 km	No Charge	No Charge

- * Effective July 2006, the Allison transmission in your vehicle may be covered by additional extended coverage, dependent on the Original Equipment Manufacturer (OEM) which manufactured your vehicle. **This additional coverage requires continued use of an Allison Approved TES 295 automatic transmission fluid and genuine Allison filters.** Please consult your OEM Dealer or authorized Allison Transmission Distributor or Dealer for specific information.

WHAT IS NOT COVERED

- **DAMAGE DUE TO ACCIDENT, MISUSE, or ALTERATION** — Defects and damage caused as the result of any of the following are not covered:
 - Flood, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle;
 - Misuse of the vehicle;
 - Installation into unapproved applications and installations;
 - Alterations or modification of the transmission or the vehicle, and
 - Damage resulting from improper storage (refer to long-term storage procedure outlined in the applicable Allison Service Manual)
 - Anything other than defects in Allison Transmission material or workmanship
- NOTE:** This warranty is void on transmissions used in vehicles currently or previously titled as salvaged, scrapped, junked, or totaled.
- **CHASSIS, BODY, and COMPONENTS** — The chassis and body company (assemblers) and other component and equipment manufacturers are solely responsible for warranties on the chassis, body, component(s), and equipment they provide. Any transmission repair caused by an alteration(s) made to the Allison transmission or the vehicle which allows the transmission to be installed or operated outside of the limits defined in the appropriate Allison Installation Guideline is solely the responsibility of the entity making the alteration(s).
- **DAMAGE CAUSED by LACK of MAINTENANCE or by the USE of TRANSMISSION FLUIDS NOT RECOMMENDED in the OPERATOR'S MANUAL** — Defects and damage caused by any of the following are not covered:
 - Failure to follow the recommendations of the maintenance schedule intervals applicable to the transmission;
 - Failure to use transmission fluids or maintain transmission fluid levels recommended in the Operator's Manual.
- **MAINTENANCE** — Normal maintenance (such as replacement of filters, screens, and transmission fluid) is not covered and is the owner's responsibility.
- **REPAIRS by UNAUTHORIZED DEALERS** — Defects and damage caused by a service outlet that is not an authorized Allison Transmission Distributor or Dealer are not covered.
- **USE of OTHER THAN GENUINE ALLISON TRANSMISSION PARTS** — Defects and damage caused by the use of parts that are not genuine Allison Transmission parts are not covered.
- **EXTRA EXPENSES** — Economic loss and extra expenses are not covered. Examples include but are not limited to: loss of vehicle use; inconvenience; storage; payment for loss of time or pay; vehicle rental expense; lodging; meals; or other travel costs.
- **"DENIED PARTY" OWNERSHIP** — Warranty repair parts and labor costs are not reimbursed to any participating or non-participating OEMs, dealers or distributors who perform warranty work for, or on behalf of, end users identified by the United States as being a "denied party" or who are citizens of sanctioned or embargoed countries as defined by the U.S. Department of Treasury Office of Foreign Assets Control. Furthermore, warranty reimbursements are not guaranteed if the reimbursement would be contrary to any United States export control laws or regulations as defined by the U.S. Department of Commerce, the U.S. Department of State, or the U.S. Department of Treasury.

OTHER TERMS APPLICABLE TO CONSUMERS AS DEFINED by the MAGNUSON-MOSS WARRANTY ACT

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Allison Transmission does not authorize any person to create for it any other obligation or liability in connection with these transmissions.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THESE TRANSMISSIONS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. PERFORMANCE OF REPAIRS AND NEEDED ADJUSTMENTS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (SUCH AS, BUT NOT LIMITED TO, LOST WAGES OR VEHICLE RENTAL EXPENSES) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.**

** Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

OTHER TERMS APPLICABLE TO OTHER END-USERS

THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE ALLISON TRANSMISSION MODELS LISTED ABOVE AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLISON TRANSMISSION DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH TRANSMISSIONS. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY.

QUESTIONS

If you have any questions regarding this warranty or the performance of warranty obligations, you may contact any Allison Transmission Distributor or Dealer or write to:

Allison Transmission, Inc.
P.O. Box 894
Indianapolis, IN 46206-0894
Attention: Warranty Administration PF-9
Form SE0614EN (201112)

Vulcan™ Series HD1700V ▽ 180° Lens 1080P Camera

CAMERA FEATURES

The Anvil™ HD1700V camera from AngelTrax features a fully articulated lens casing, adjustable vertically and horizontally, to obtain extreme wide-angle views of the vehicle's interior or exterior and surroundings. Equipped with Super Infrared, automated white balance and digital noise reduction, the Anvil™ HD1700V camera is capable of capturing astonishingly clear high-definition images day or night.

DIMENSIONS

- Height: 1.5 inches
- Width: 3.4 inches
- Depth: 2.9 inches
- Weight: 0.6 pounds

LENS

- 180° lens/
170° field of view
- 1.7mm focal length
- 2.12MP
- 1/2.7" CMOS sensor
- Fully articulated
lens casing for
image orientation

MINIMUM ILLUMINATION

- 0.05 Lux / F1.8
- 0 Lux when IR on

AUTO ELECTRONIC SHUTTER

- 1/60s (1/50s) - 1/100,000s

INFRARED

- Smart IR circuit design for auto-exposure control when IR is ON
- Super IR: 98 - 164 feet

DAY AND NIGHT

- External sensor for auto switch between day and night modes

IMAGE CONTROL

- Digital Wide Dynamic Range (DWDR)
- Auto Tracking White Balance (ATW)
1,800°K ~ 10,500°K
- Automatic Gain Control: (AGC)

SIGNAL TO NOISE RATIO

- S/N > 60dB

VIDEO OUTPUT LEVEL

- 1.0 Vp-p Composite video/
75 Ohm



OPERATING CONDITIONS

- -40°F ~ +158°F (-40° C ~ +70°C)

POWER INPUT

- DC 12V (9V ~ 16V)

POWER CONSUMPTION

- (IR on) 300mA @ DC 12V
- (IR off) 75mA @ DC 12V

IP RATING

- IP68

HOUSING/CASING MATERIAL

- Steel
- Anti-vibration
- Vandal-resistant

VIDEO COMPRESSION

- H.264

IMAGE RESOLUTION

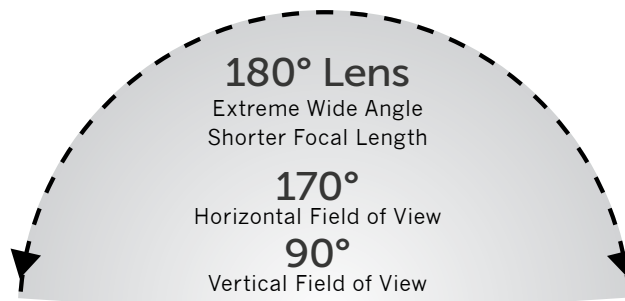
- 1080P high definition
- NTSC: 1920 x 1080 @30fps
- PAL: 1920 x 1080 @ 25fps

IMAGE FRAME RATE

- 30fps

AUDIO

- Noise-gated microphone



Vulcan™ Series HD2500V ▼ 2.5mm 1080P Camera

CAMERA FEATURES

The versatile Anvil™ HD2500V camera from AngelTrax features a fully articulated lens casing, adjustable vertically and horizontally, to obtain wide-angle views of the vehicle's interior or exterior and surroundings. Equipped with Super Infrared, automated white balance and digital noise reduction, the Anvil™ HD2500V camera is capable of capturing astonishingly clear high-definition images day or night.

DIMENSIONS

- Height: 1.5 inches
- Width: 3.4 inches
- Depth: 2.9 inches
- Weight: 0.6 pounds

LENS

- 2.5mm focal length
- 3MP
- CMOS sensor
- Fully articulated lens casing for image orientation

MINIMUM ILLUMINATION

- Color: 0.1 Lux
- B/W: 0.5 Lux
- Sens-up x 60: 0.02 Lux

ELECTRONIC SHUTTER

- NTSC: 1/60s · 1/50,000s
- PAL: 1/50s · 1/50,000s

INFRARED

- Super IR circuit design for auto-exposure control when IR is ON
- Super IR: 98 · 164 feet

DAY AND NIGHT

- External sensor for auto switch between day and night modes

IMAGE CONTROL

- Digital Wide Dynamic Range (DWDR)
- Auto Tracking White Balance (ATW)
- Automatic Gain Control: High



SIGNAL TO NOISE RATIO

- S/N > 50dB

VIDEO OUTPUT LEVEL

- 1.0 Vp-p (75 composite)

AUTOMATIC GAIN CONTROL

- Auto

VIDEO COMPRESSION

- H.264

IMAGE RESOLUTION

- NTSC: 1920 x 1080

IMAGE FRAME RATE

- 1920 x 1080 @25/30fps

FRAME INTEGRATION

- Sens-up: Low

AUDIO

- Noise-gated microphone

OPERATING CONDITIONS

- -40°F ~ +158°F (-40°C ~ +70°C)

POWER INPUT

- DC 12V ± 10%

POWER CONSUMPTION

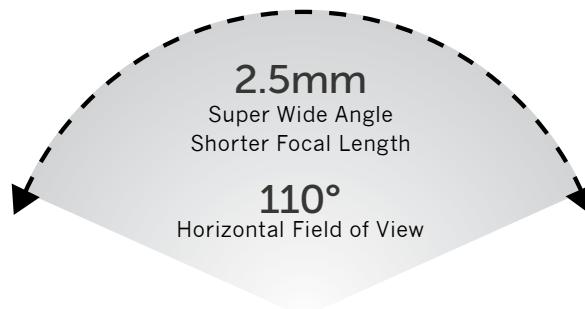
- (IR on) 300mA @ DC 12V
- (IR off) 75mA @ DC 12V

IP RATING

- IP68

HOUSING/CASING MATERIAL

- Steel
- Anti-vibration
- Vandal-resistant



Vulcan™ Series HD3600V ▼ 3.6mm 1080P Camera

CAMERA FEATURES

The versatile Anvil™ HD3600V camera from AngelTrax features a fully articulated lens casing, adjustable vertically and horizontally, to obtain the desired view of the vehicle's interior or exterior and surroundings. Equipped with Super Infrared, automated white balance and digital noise reduction, the Anvil™ HD3600V camera is capable of capturing astonishingly clear high-definition images day or night.

DIMENSIONS

- Height: 1.5 inches
- Width: 3.4 inches
- Depth: 2.9 inches
- Weight: 0.6 pounds

LENS

- 3.6mm focal length
- 3MP
- CMOS sensor
- Fully articulated lens casing for image orientation

MINIMUM ILLUMINATION

- Color: 0.1 Lux
- B/W: 0.5 Lux
- Sens-up x 60: 0.02 Lux

ELECTRONIC SHUTTER

- NTSC: 1/60s - 1/50,000s
- PAL: 1/50s - 1/50,000s

INFRARED

- Super IR circuit design for auto-exposure control when IR is ON
- Super IR: 98 - 164 feet

DAY AND NIGHT

- External sensor for auto switch between day and night modes

IMAGE CONTROL

- Digital Wide Dynamic Range (DWDR)
- Auto Tracking White Balance (ATW)
- Automatic Gain Control: High



SIGNAL TO NOISE RATIO

- S/N > 50dB

VIDEO OUTPUT LEVEL

- 1.0 Vp-p (75 composite)

AUTOMATIC GAIN CONTROL

- Auto

VIDEO COMPRESSION

- H.264

IMAGE RESOLUTION

- NTSC: 1920 x 1080

IMAGE FRAME RATE

- 1920 x 1080 @25/30fps

FRAME INTEGRATION

- Sens-up: Low

AUDIO

- Noise-gated microphone

OPERATING CONDITIONS

- -40°F ~ +158°F (-40°C ~ +70°C)

POWER INPUT

- DC 12V ± 10%

POWER CONSUMPTION

- (IR on) 300mA @ DC 12V
- (IR off) 75mA @ DC 12V

IP RATING

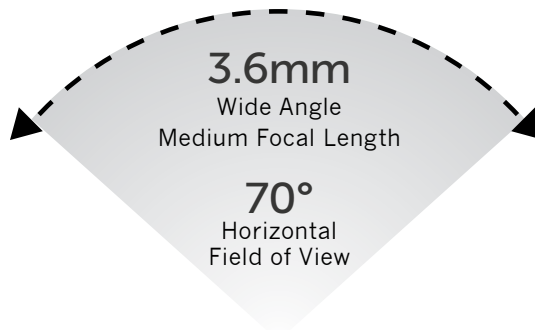
- IP68

HOUSING/CASING MATERIAL

- Steel
- Anti-vibration
- Vandal-resistant

HD3600V SHOWN WITH YELHS1 YELLOW HOUSING

For use in school bus applications as overview camera with IntelliGuard™ Automated Stop Arm Violation System



Specifications, features and applications of use are subject to change without notice. ▼ 3/2019 B

Vulcan™ Series V12 HD/IP Mobile DVR

12-CHANNEL DVR

DIMENSIONS

- Height: 3.5 inches
- Width: 8.7 inches
- Depth: 11.6 inches
- Weight: 5.7 pounds

TWELVE (12) A/V INPUTS

- 8 channels D1, WD1, 720P, or up to 1080P
- + 4 channels IP up to 1080P

VIDEO OUTPUTS

- 2 channels

AUDIO OUTPUTS

- 2 channels

CAMERA COMPATIBILITY

- 8 channels D1, WD1, 720P, or up to 1080P (see NTSC)
- 4 channels IP up to 1080P

STORAGE MEDIA

RECORDING MEDIUM

- One (1) 2.5" SATA hard drive and one (1) optional solid-state SD card

CAPACITY

- 1TB (standard) up to 2TB (capable) (optional) 64GB SD card up to 512GB

RECORDING OPTIONS

- SD card slot for redundant recording

INTERFACE

NETWORK DATA CONNECTION

- One RJ45 x 1 (10/100 M/1000M)

EXPANSION

- RS232 x 2, RS485 x 2

GPS INTERFACE

- Built-in, compatible with optional GPS antenna

DRIVER ACTION DETECTION

PANIC BUTTON

- The remote status indicator (panic button) can be connected to show DVR power/record status without using a video monitor
- The driver-operated panic button has the following functions:
 - Solid green LED indicates that the unit has power and is recording
 - Event marker (panic button)

DRIVER ACTION DETECTION WIRES

- 8 signal wires individually programmable to indicate alarm or event



BUILT-IN G-FORCE SENSOR

COMPRESSION FORMAT

- Video: H.264
- Audio: ADPCM, G.711A G.711U

RECORD RESOLUTION

NTSC

- 1080P, 720P, WD1(928X480), WHD1(928X240), WCIF(464X240), D1(704x480), HD1(704x240), CIF(352x240)

PAL

- 1080P, 720P, WD1(928X576), WHD1(928X288), WCIF(464X288), D1(704X576), HD1(704x288), CIF(352x288)

RECORDING OPTIONS

- **Continuous record:** System will record all channels continuously while vehicle is running (factory setting).
- **Alarm record:** System will record when an alarm is triggered.
- **Motion record:** System will record when the cameras detect motion while vehicle is running.
- **Schedule record:** System will boot and record according to user-selectable schedule.

ELECTRICAL & OPERATING REQUIREMENTS

AUTO ON/OFF DETECTION

- ACC detection

DELAY OFF SETTING

- User selectable up to 24 hours

OPERATING VOLTAGE

- 8~36VDC

OPERATING TEMPERATURE

- -14°F (-25°C) ~ +158°F (+70°C); -40°F (-40°C) ~ +158°F (+70°C) with heater

POWER CONSUMPTION

- 0W-105.3W

POWER SUPPLY

INPUT RANGE

- DC 8-36V

OUTPUT RANGE

- DC5V/DC12V

OUTPUT CURRENT

- 5V@500mA, 12V@500mA

BUILT-IN POWER PROTECTION

LOW VOLTAGE PROTECTION

- User selectable and programmed at installation

HOUSING/CASING

- Removable, shock-mounted
- Vandal-resistant locking front cover
- Shock-resistant: MIL-STD-810F
- Aluminum
- Optional fan with filter, removable for cleaning

BUILT-IN WI-FI MODULE

OPTIONAL COMPONENTS

VIRTUAL SYNCHRONIZED MAPPING

- External Virtual Synchronized Mapping™ module with North American maps
- Includes GPSV1 antenna
- Embeds GPS tracking information synchronized with recorded video footage

GPS ANTENNA

FIREPROOF BOX BACKUP

CELLULAR MODEM



2018 Product Application Guide • 3-7-18

Using NCL 1000 3454HB-2
model for WV DOT



NCL1000-2 CENTURY SERIES™

NCL1000-2 Century Series™ Features

- Fully automatic NHTSA compliant lift, operated by an attendant
- Loading position - either direction
- Interfaces with OEM interlocks
- Lift mounted lights - platform illuminated as it deploys
- Hand control with illuminated functions
- Locking mechanical Inboard Barrier (IB), powder coated yellow for safety and high visibility, prevents movement if occupied
- Pump design prevents platform folding when occupied, quiet operation and low current draw
- Durable redesigned baseplate reduces lift weight and allows for quicker and easier service of hose/wiring
- Easily installed, step-by-step installation instructions, no peripheral hardware required
- Visual and audible warning provides notification of unsafe conditions
- Spring-loaded outer barrier that will transition to the fully up position as the platform leaves the ground, has durable rubber nose guard and is powder coated yellow for safety and high visibility
- Parallel arms lift with hydraulic cylinders
- Side or rear door application
- Several platform widths and lengths
- Dual handrails for security and convenience
- Bridging feature permits the wheelchair user to board the lift from sidewalks or inclines
- Floor to ground travel is 48"
- Lifting capacity is 1000 lbs
- Integrated back-up pump
- Equipped with an adjustable anti-rattle feature to avoid unpleasant noise in the vehicle during transit
- Durable high-gloss powder coated finish
- Lift-Tite system stows the lift platform securely while the vehicle is in transit
- Pump module with removable cover offers easy access to all components

NCL1000-2 Century Series™ Models

NCL1000IB3351-2

NHTSA Compliant Usable Platform: 33" x 51"

NCL1000IB3451-2

NHTSA Compliant Usable Platform: 34" x 51"

NCL1000IB3451HB-2

NHTSA Compliant Usable Platform: 34" x 51"

NCL1000IB3454-2

NHTSA Compliant Usable Platform: 34" x 54"

NCL1000IB3454HB-2

NHTSA Compliant Usable Platform: 34" x 54"

NCL1000IB3751HB-2

NHTSA Compliant Usable Platform: 37" x 51"

NCL1000IB3754HB-2

NHTSA Compliant Usable Platform: 37" x 54"

For a front-mounted pump assembly, add "F" to the model number when ordering (example: NCL1000FIB3351-2).

IB = Inboard Barrier HB = Handrail Belt

General Function: Electrohydraulic, power up/gravity down operation

Operation: Hydraulic pump with two lifting cylinders

Control: hand-held control box

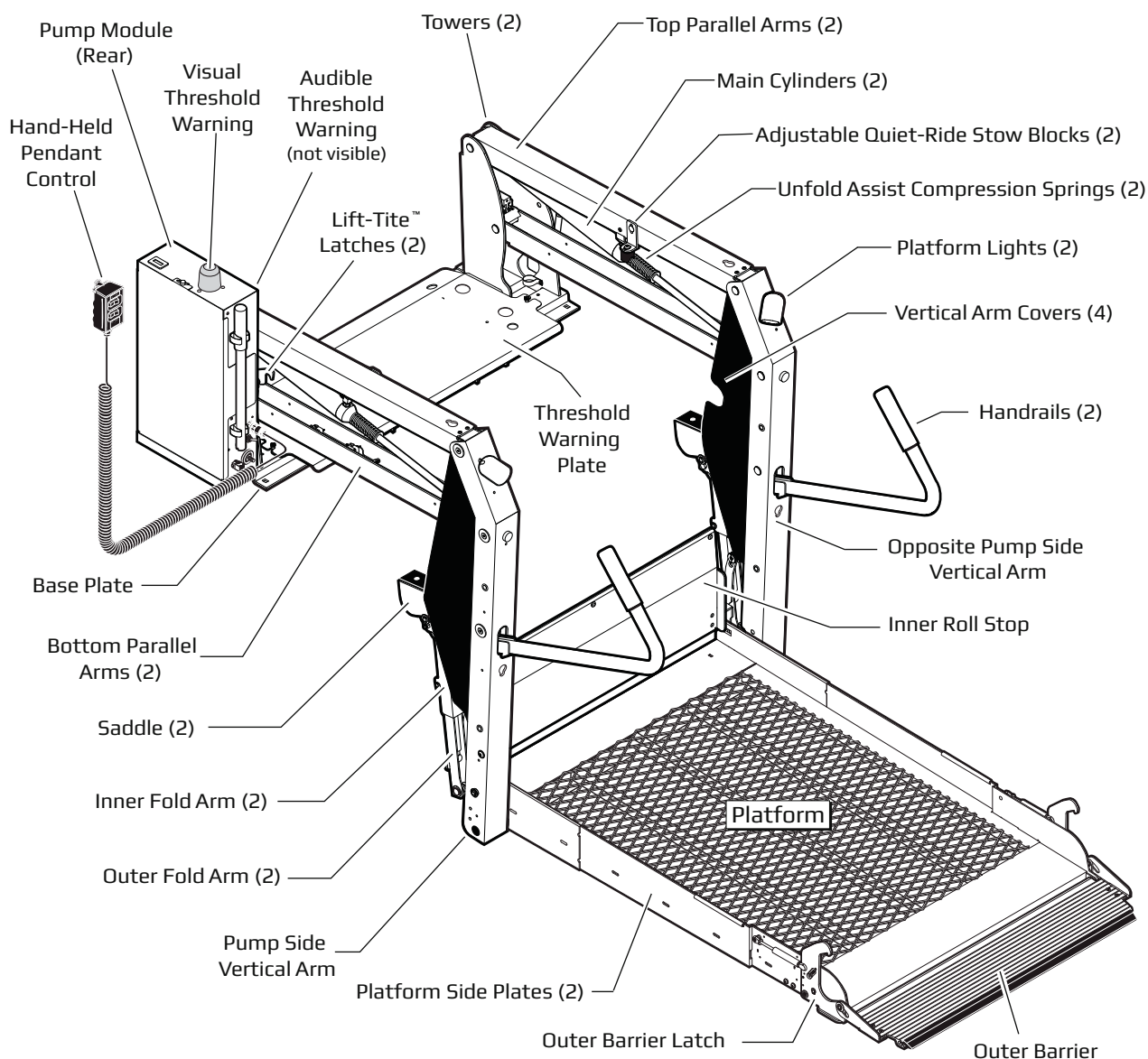
Hydraulic: Pressure Max. 2,495 psi, Fluid is Univis HVI 26, oil reservoir is .33 gal

Construction: Steel structure with powder coat finish

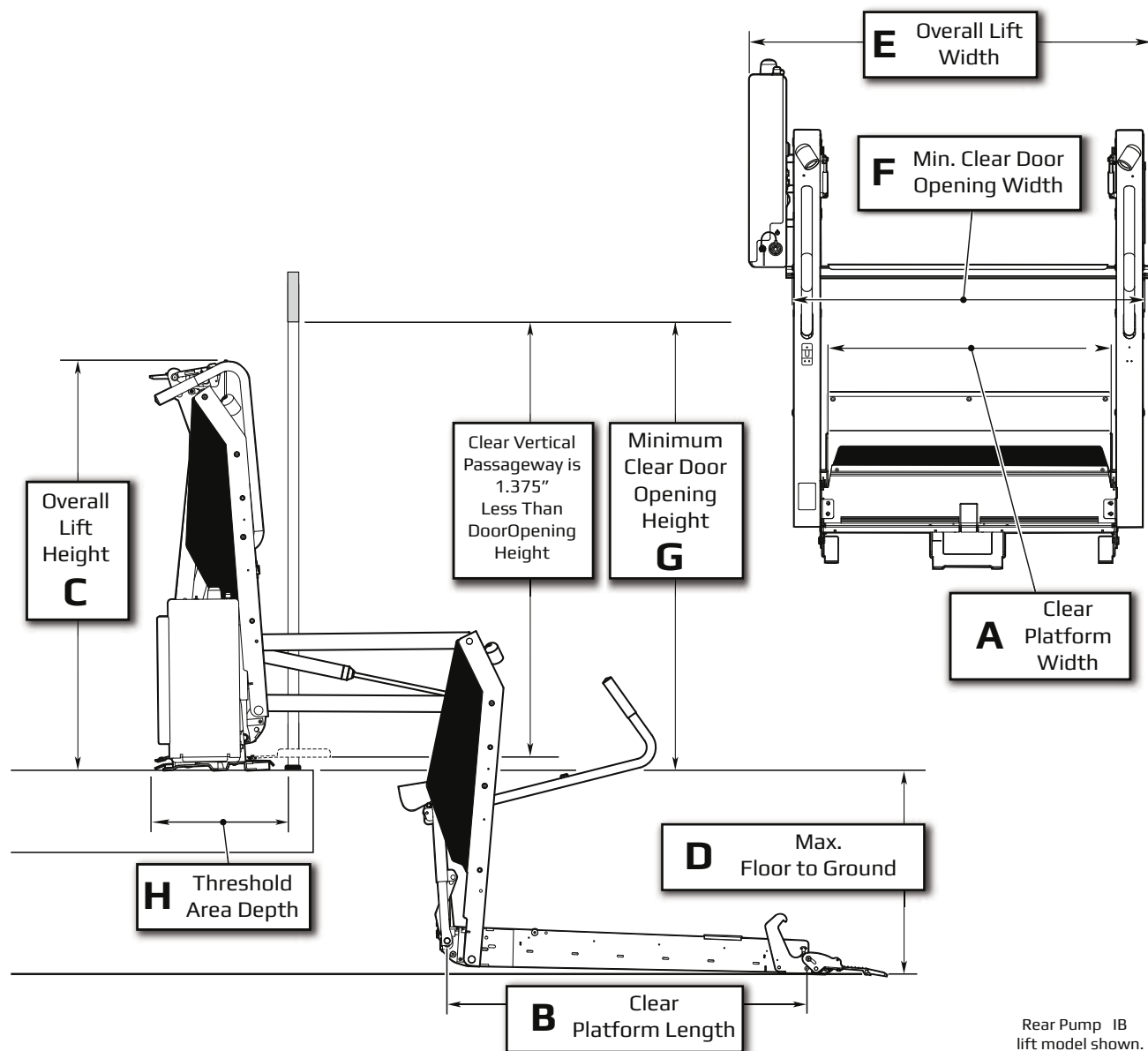
Operating Temperature: 0°F to 140°F

Power Supply: 12VDC

Current Consumption: Max. 70A (12V)



NCL1000-2 Century Series™ Dimensions



Rear Pump 1B
lift model shown.

All dimensions are for reference only.

NCL1000-2 Century Series™			A	B	C	D	E	F	G	H
Lift Model Number	Lift Weight lbs	Lifting Capacity lbs	Clear Platform Width	Clear Platform Length	Overall Lift Height	Max. Floor to Ground	Overall Lift Width	Min. Clear Door Opening Width	Min. Clear Door Opening Height	Threshold Area Depth
NCL1000IB3351-2	358	1000	33"	51"	56.25"	48"	46"	42"	57.375"	18"
NCL1000IB3451-2	358	1000	34"	51"	56.25"	48"	47"	43"	57.375"	18"
NCL1000IB3451HB-2	358	1000	34"	51"	61.25"	48"	47"	43"	62.375"	18"
NCL1000IB3454-2	358	1000	34"	54"	59.25"	48"	47"	43"	60.375"	18"
NCL1000IB3454HB-2	358	1000	34"	54"	66.25"	48"	47"	43"	67.375"	18"
NCL1000IB3751HB-2	380	1000	37"	51"	61.25"	48"	50"	46"	62.375"	18"
NCL1000IB3754HB-2	385	1000	37"	54"	66.25"	48"	50"	46"	67.375"	18"

NCL1000-2 Century Series™

NHTSA Installation Kits

	Std. Length Rear Door	Ext. Length Rear Door
Ford Transit (2015)	400774KS	400773KS
Ford Transit Template (2015)	400778KS	400778KS
Sprinter (2014 & up)		401174KS
Sprinter Template (2014 & up)		401177KS

Van Mounting Kits contain floor reinforcements for 403/404 compliance.

NCL1000-2 Century Series™

Accessories



◀ **31579KS**
Handrail Restraint
Retractable -
for 51" Platforms

35533KS
Handrail Restraint
Retractable -
for 54" Platforms

35331KS
Handrail Restraint
Non-Retractable



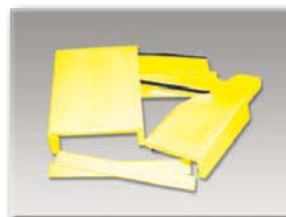
◀ **35295K**
Upper Tower Support Kit



◀ **33659KS**
Replacement
Hand-Held
Control



◀ **23708A913**
"Full Curtain"
Lift Cover
(NCL917-2)



◀ **402605KS**
Padding Kit
NCL2 Series

NCL1000-2 Century Series™ Specifications

COMMERCIAL WHEELCHAIR LIFT SPECIFICATIONS - IN COMPLIANCE WITH United States Department of Transportation Rules and Regulations 49CFR, Part 38. FROM THE AMERICANS WITH DISABILITIES ACT OF 1990 and NHTSA Rule 403 (2004) “Provided to make your spec writing easier.”

The wheelchair lift is compliant with Federal Motor Vehicle Safety Standard 403 for platform lift systems for motor vehicles. The lift shall have been tested to a minimum static load of 2400#. The lift shall have 1000# rated lifting capacity. The base plate shall be a corrugated designed member to provide rigidity to minimize lift deflection when placed under load.

The power supply shall be a 12 volt electro-hydraulic system operating two single-acting cylinders. The hydraulic power pack system shall be of modular design allowing for easy removal and field replacement, if needed. The operation of the unit shall provide a smooth, jerk-free ride in both up and down directions. The power operation of the hydraulic cylinders shall be of a pull-type design for smooth lifting operation and improved synchronous arm movement. The pivot pins in the trunnion (knuckle) of the pivot arms shall be of stationary design. The hydraulic system shall be regulated by two separate relief valves, one of which is designed to prevent accidental stowing when occupied.

The hand control for lift operation shall be of a one-hand operation design made of durable plastic. The hand control will provide user with illuminated functions. The hand control cable shall be coiled with quick-change connections for ease of maintenance or field change.

A manual back-up system shall be provided to ensure operation of the lift in case of electrical failure. The back-up system shall provide a reliable means of manually raising and lowering the lift while occupied. The back-up system shall fold and unfold the platform. The back-up pump shall be integrated with the hydraulic power pack system such that no hydraulic lines or fittings are required.

The platform shall be of steel construction and the surface shall be of see-through grating allowing for improved visibility and safer use in inclement weather. The platform shall have a minimum usable wheelchair passageway width of 33 inches and a minimum usable length of 51 inches requiring a 57 inch vertical clear door opening. The sides of the platform shall be a minimum of 2.5 inches high.

The platform shall be automatically folded and unfolded and fully automatic in operation. The platform shall allow both inboard and outboard facing of wheelchair and mobility aid users. The platform entrance ramp shall be extruded aluminum for weight savings, have a rubber leading edge and raised ribs for traction. The outer barrier must not raise if occupied with 25 lbs. The outer barrier shall be the sole outboard wheelchair retention device and shall be interlocked and comply with the FMVSS 403 requirements. Dual handrails shall be provided to add security and convenience. These handrails shall be 1.25 inch minimum diameter, minimum 30 inches in height, minimum of 8 inches in length, and withstand a 100# force in any direction (including vertical) without permanent deformation. The lift must have a fail safe system to prevent stowing if solenoid welds. The platform shall have “built in” lighting to meet 404 platform lighting requirements with no auxiliary lighting.

All lift components shall be finished with a baked-on powder coating, which will meet a salt spray test of 1000 hours, to provide corrosion resistance and a long service life. BraunAbility Century Series to include but not limited to the following model numbers:

- NCL1000IB3351-2, NCL1000FIB3351-2, NCL1000IB3451-2, NCL1000FIB3451-2, NCL1000IB3451HB-2, NCL1000FIB3451HB-2, NCL1000IB3454-2, NCL1000FIB3454-2, NCL1000IB3454HB-2, NCL1000FIB3454HB-2, NCL1000IB3751HB-2, NCL1000FIB3751HB-2, NCL1000IB3754HB-2, NCL1000FIB3754HB-2



braunability.com

800.THE.LIFT

ISO 9001:2008

631 West 11th Street, Winamac, IN 46996, USA

Braun® Limited Warranty

WARRANTY COVERAGE AND WARRANTY COVERAGE TIME PERIODS

The Braun Corporation ("Braun") warranty covers certain parts of this wheelchair lift for three (3) years or 10,000 cycles and the cost of labor to repair or replace those parts for one (1) year or 3,000 cycles. If The Braun Corporation receives the warranty registration card within 20 days after the lift is put into service, the warranty labor coverage will increase from one (1) year or 3,000 cycles to three (3) years or 10,000 cycles. In addition, providing the warranty registration card is returned as noted above, the following lift's power train parts are warrantied for five (5) years or 15,000 cycles: Cable, Cylinder, Flow Control, Gear Box, Motor, Pump, Hydraulic Hose and Fittings. This limited warranty covers substantial defects in materials and workmanship of the lift, provided that the lift is operated and maintained properly and in conformity with the owner's manual. The warranty period begins on the date that the product is delivered to the first retail purchaser by an independent, authorized dealer of Braun, or, if the dealer places the product into any type of service prior to retail sale, on the date the dealer first places the product in such service. This limited warranty applies only to the first purchaser. It may not be transferred.

WHAT BRAUN WILL DO TO CORRECT PROBLEMS

In the event that a substantial defect in material or workmanship, attributable to Braun, is found to exist during the first year of warranty coverage, it will be repaired or replaced, at Braun's option, without charge for parts or labor to the owner, in accordance with the terms, conditions and limitations of this limited warranty. If the substantial defect in material or workmanship, attributable to Braun, is found to exist during the second or third year of warranty coverage, it will be repaired or replaced, at Braun's option, without charge to the owner for parts, only, in accordance with the terms, conditions and limitations of this limited warranty. Providing the warranty card is returned within 20 days as outlined above, the labor warranty period will be extended by two years of coverage in accordance with the terms, conditions, and limitations of this limited warranty. In addition, if a substantial defect in material or workmanship, attributable to Braun, is found to exist during the fourth or fifth year of warranty coverage to the following lift's power train parts: Cable, Cylinder, Flow Control, Gear Box, Motor, Pump, Hydraulic Hose and Fittings, it will be repaired or replaced, at Braun's option, without charge to the owner for parts, only, in accordance with the terms, conditions and limitations of this limited warranty. The cost of labor for repair or replacement at any time after the warranty coverage detailed above is the sole responsibility of the owner.

Braun's obligation to repair or replace defective materials or workmanship is the sole obligation of Braun under this limited warranty. Braun reserves the right to use new or remanufactured parts of similar quality to complete any work, and to make parts and design changes from time to time without notice to anyone. Braun reserves the right to make changes in the design or material of its products without incurring any obligation to incorporate such changes in any previously manufactured product. Braun makes no warranty as to the future performance of this product, and this limited warranty is not intended to extend to the future performance of the product. In addition, the owner's obligation to notify Braun, or one of its authorized, independent dealers, of a claimed defect does not modify any obligation placed on the owner to contact Braun directly when attempting to pursue remedies under state or federal law.

LIMITATIONS, EXCLUSIONS AND DISCLAIMER OF IMPLIED WARRANTIES

ANY IMPLIED WARRANTY THAT IS FOUND TO ARISE BY WAY OF STATE OR FEDERAL LAW, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS, IS LIMITED IN DURATION TO THE TERMS OF THIS LIMITED WARRANTY AND IS LIMITED IN SCOPE OF COVERAGE TO THE SCOPE OF COVERAGE OF THIS LIMITED WARRANTY. Braun disclaims any express or implied warranty, including any implied warranty of fitness or merchantability, on items excluded from coverage as set forth in this limited warranty. Braun makes no warranty of any nature beyond that contained in this limited warranty. No one has authority to enlarge, amend or modify this limited warranty, and Braun does not authorize anyone to create any other obligation for it regarding this product. Braun is not responsible for any representation, promise or warranty made by any independent dealer or other person beyond what is expressly stated in this limited warranty. Any selling or servicing dealer is not Braun's agent, but an independent entity.

Braun® Limited Warranty

BRAUN SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES THAT MAY RESULT FROM BREACH OF THIS LIMITED WARRANTY OR ANY IMPLIED WARRANTY. THIS EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES SHALL BE INDEPENDENT OF ANY FAILURE OF THE ESSENTIAL PURPOSE OF ANY WARRANTY, AND THIS EXCLUSION SHALL SURVIVE ANY DETERMINATION THAT THIS LIMITED WARRANTY OR ANY IMPLIED WARRANTY HAS FAILED OF ITS ESSENTIAL PURPOSE. This warranty does not cover, and in no event shall Braun be liable for towing charges, travel, lodging, or any other expense incurred due to the loss of use of the product or other reason.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

HOW TO GET SERVICE

To obtain warranty service the owner must do all of the following:

1. Notify an authorized service center, of the claimed defect attributable to Braun, within the warranty coverage period designated above
2. Provide the notification mentioned in (1), above, within ten (10) days of when the owner discovered, or should have discovered, the claimed defect
3. Promptly schedule an appointment with and take the product to an authorized service center for service.
4. Pay any transportation costs and all expenses associated with obtaining warranty service.

Since Braun does not control the scheduling of service work at the independent dealerships you may encounter some delay in scheduling or completion of work. If you need assistance you may contact Braun, at 631 West 11th Street, Winamac, Indiana 46996; 1-800-THE-LIFT, (843-5438).

If two (2) or more service attempts have been made to correct any covered defect that you believe impairs the value, use or safety of the product, or if it has taken longer than thirty (30) days for repairs to be completed, you must, to the extent permitted by law, notify Braun directly, in writing, at the above address, of the unsuccessful repair(s) of the alleged defect(s) so that Braun can become directly involved in providing service pursuant to the terms of this limited warranty.

WHAT IS NOT COVERED

This Limited Warranty does not cover any of the following: defects in materials, components or parts of the product not attributable to Braun, any material, component or part of the product that is warranted by another entity (Note: the written warranty provided by the manufacturer of the material, component or part is the direct responsibility of that manufacturer); items that are added or changed after the product leaves Braun's possession; additional items installed at any dealership, or other place of business, or by any other party, other than Braun; normal wear, tear, usage, maintenance, service, periodic adjustments, the effects of condensation or moisture from condensation; mold or any damage caused by mold; imperfections that do not affect the product for its intended purpose; items that are working as designed but that you are unhappy with; problems related to mis-operation, misuse, mishandling, neglect or abuse, including failure to maintain the product in accordance with the owner's manual, or other routine maintenance such as inspections, lubricating, adjustments, tightening of screws, sealing, wheel alignments or rotating tires; damage due to accident or collision, including any acts of weather or damage or corrosion due to the environment; theft, vandalism, fire, or other intervening acts not attributable to Braun; damage resulting from tire wear or tire failure; defacing, scratches, dents or chips on any interior or exterior surface of the product, including those caused by rocks or other road hazards, damage caused by off road use, overloading or alteration of the product, or any of its components or parts.

Defects and/or damage to interior and exterior surfaces and other appearance items may occur at the factory or when the product is in transit. These items are usually detected and corrected at the factory or by

Braun® Limited Warranty

a dealer prior to delivery to the purchaser. You must inspect the product for this type of damage when you take delivery. If you find any such defect or damage you must notify the selling dealer, or Braun, at the time of delivery to have these items covered by this limited warranty and to have work performed on the items at no cost to you as provided by this limited warranty.

EVENTS DISCHARGING BRAUN FROM OBLIGATION UNDER WARRANTY

The following shall completely discharge Braun from any express or implied warranty obligation to repair or replace anything and void this warranty: misuse, neglect, collision, accidents, failure to provide routine maintenance (See Owner's Manual), unauthorized alteration, off road use, Acts of Nature, damage from weather or the environment, theft, vandalism, tampering, fire, explosions, overloading the product and odometer tampering.

LEGAL REMEDIES

Any action to enforce any portion of this limited warranty, or any implied warranty, must be commenced within six (6) months after expiration of the warranty coverage period designated above or the action will be barred because of the passage of time. Any performance of repairs shall not suspend this limitation period from expiring. Any performance of repairs after the warranty coverage period has expired, or performance of repairs regarding any thing excluded from coverage under this limited warranty shall be considered "good will" repairs, and they will not alter the terms of this limited warranty, or extend the warranty coverage period or the filing limitation period in this paragraph. In addition, since it is reasonable to expect that the product will need some service during the warranty period; this warranty does not extend to future performance. It only sets forth what Braun will do and does not guarantee anything about the product for any time period. Nothing in this warranty, or any action of Braun, or any agent of Braun, shall be interpreted as an extension of any warranty period or the filing limitation period in this paragraph. Some states do not allow a reduction in the statute of limitations, so this reduction may not apply to you.

WARRANTY REGISTRATION and MISCELLANEOUS

Your warranty registration records should be completed and delivered to the appropriate companies, including the Braun Delivery Checklist & Warranty form. That form must be returned to Braun within twenty (20) days of purchase. The Braun warranty will not be registered unless this warranty registration is completed and received by Braun. Failure to file this warranty registration with Braun will not affect your rights under this limited warranty as long as you can present proof of purchase, but it can cause delays in obtaining the benefits of this limited warranty, and it changes the start date of the warranty to the date of final assembly of the product by Braun.

Braun agrees to repair or replace any of its factory installed parts found to have substantial defects within the appropriate warranty period designated above, provided that the repair is authorized by Braun and carried out by an authorized service center (a Braun labor schedule determines the cost allowance for repairs). Braun will not honor any warranty claim for repairs or replacement of parts unless the claim is submitted with the appropriate paperwork, and the work is completed by an independent, factory authorized service center. The appropriate paperwork can be obtained by written or phone contact with Braun at the contact information in this warranty.

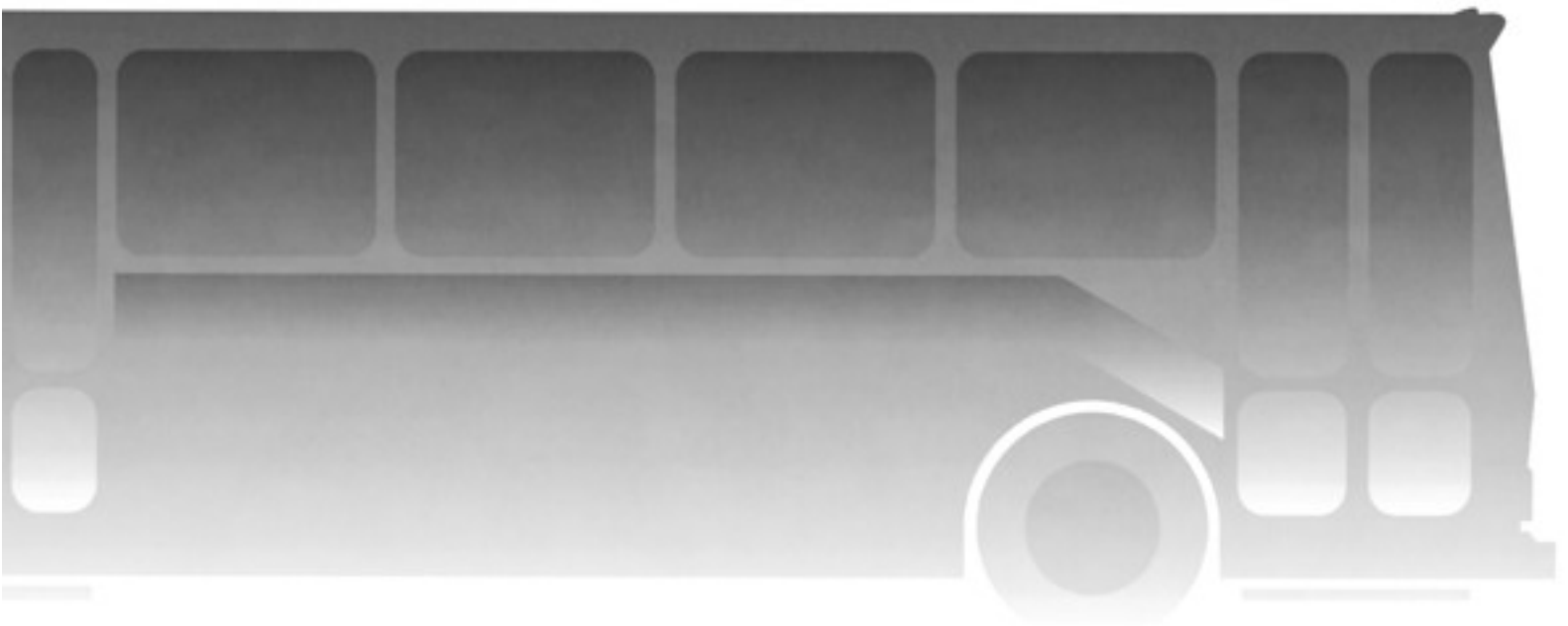
Braun reserves the right to designate where any warranty work can be performed. Braun also reserves the right to examine any defective workmanship or part prior to giving any authorization for warranty work. Braun's return authorization procedure must be adhered to in order to process any warranty claims.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.



Cummins Warranty

All Engines
Worldwide
All Bus
(Except U.S./Canada Diesel Powered School Buses)



Coverage

Products Warranted

This warranty applies to new diesel, LPG, compressed or liquid natural gas fueled engines sold by Cummins and delivered to the first user on or after January 1, 1999, that are used in all bus categories worldwide (except U.S./Canada diesel powered school buses) (Engine).

Base Engine Warranty

The Base Engine Warranty covers any failures of the Engine which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure). This coverage begins with the sale of the Engine by Cummins and ends two years after the date of delivery of the Engine to the first user.

Engine aftertreatment components included in the Cummins Critical Parts List (CPL) and marked with a Cummins part number are covered under the Base Engine Warranty.

Extended Major Components Warranty

The Extended Major Components Warranty applies to all except B and ISB series Engines and covers Warrantable Failures of the engine cylinder block, camshaft, crankshaft, connecting rods and Cummins fan clutch (Covered Parts).

Bushing and bearing failures are not covered.

This coverage begins with the expiration of the Base Engine Warranty and ends three years or 300,000 miles (482,804 kilometers) or 10,800 hours of operation, whichever occurs first, after the date of delivery of the Engine to the first user.

Emission Warranty

Additional coverage is outlined under the Emission Warranty.

These warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

During The Base Engine Warranty

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, belts, hoses and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable costs for towing a vehicle disabled by a Warrantable Failure to the nearest authorized repair location. In lieu of towing expenses, Cummins will pay reasonable costs for mechanics to travel to and from the location of the vehicle, including meals, mileage, and lodging, when the repair is performed at the site of the failure.

During The Extended Major Components Warranty

Cummins will pay for the repair or, at its option, replacement of the defective Covered Part and any Covered Part damaged by a Warrantable Failure of the defective Covered Part.

Owner Responsibilities

During The Base Engine Warranty

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items replaced during warranty repairs unless such items are not reusable due to the Warrantable Failure.

During The Extended Major Components Warranty

Owner is responsible for the cost of all labor needed to repair the Engine, including the labor to remove and reinstall the engine. When Cummins elects to repair a part instead of replacing it, Owner is not responsible for the labor needed to repair the part.

Owner is responsible for the cost of all parts required for the repair except for the defective Covered Part and any Covered Part damaged by a Warrantable Failure of the defective Covered Part.

Owner is responsible for the cost of lubricating oil,

antifreeze, filter elements and other maintenance items replaced during the repair.

During The Base Engine and Extended Major Components Warranties

Owner is responsible for the operation and maintenance of the Engine as specified in the applicable Cummins Operation and Maintenance Manuals. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Except for Engines disabled by a Warrantable Failure during the Base Engine Warranty, the Owner must also deliver the Engine to the repair facility. Locations in the United States and Canada are listed in the Cummins United States and Canada Sales and Service Directory.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs and for "downtime" expenses, fines, cargo damage, all applicable taxes, all business costs, and other losses resulting from a Warrantable Failure.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine. Cummins is also not responsible for failures caused by incorrect oil, fuel or catalytic reagent or by water, dirt or other contaminants in the fuel, catalytic reagent or oil.

This warranty does not apply to accessories which bear the name of another company. Such non-warranted accessories include, but are not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, vacuum pumps, power steering pumps and air compressors.

Excessive oil consumption for B series engines is covered for the duration of the coverage or 100,000 miles (160,935 kilometers) or 7,000 hours from the date of delivery of the Engine to the first user, whichever of the three occurs first. Before a claim for

excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failures of belts and hoses supplied by Cummins are covered for the first year from the date of delivery of the Engine to the first user.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts, or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining coverage hereunder.

Cummins Inc. reserves the right to interrogate Electronic Control Module (ECM) data for purposes of failure analysis.

CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THESE WARRANTIES AND THE EMISSION WARRANTY SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or country to country.

Emission Warranty

Products Warranted

This emission warranty applies to new diesel, LPG, compressed or liquid natural gas fueled engines marketed by Cummins that are used in the United States* in vehicles designed for transporting persons or property on a street or highway. This warranty applies to Engines delivered to the first user on or after January 1, 1999.

Coverage

Cummins warrants to the first user and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. Federal emission regulations

applicable at the time of manufacture and that it is free from defects in material or factory workmanship which would cause it not to meet these regulations within the longer of the following periods: (A) Five years or 100,000 miles (160,935 kilometers) of operation, whichever occurs first, as measured from the date of delivery of the Engine to the first user, or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

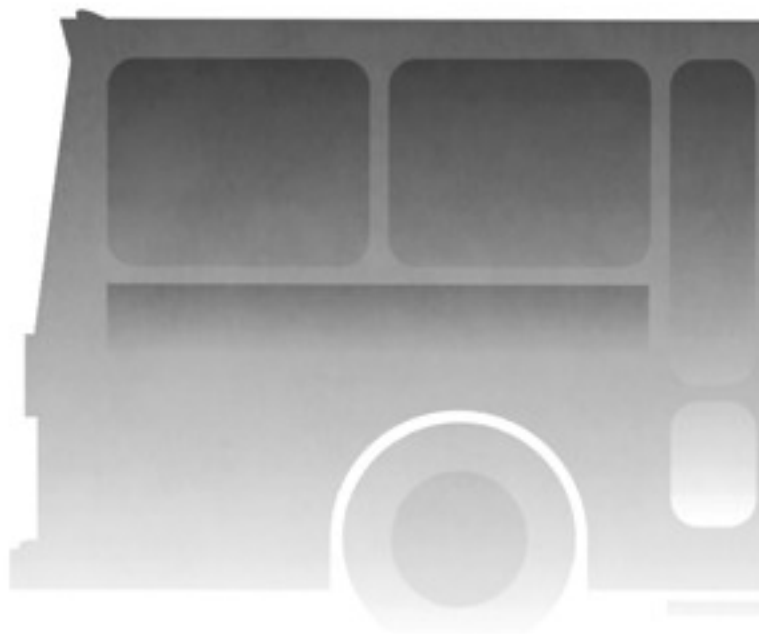
Failures, other than those resulting from defects in material or factory workmanship, are not covered by this warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine. Cummins is also not responsible for failures caused by incorrect oil, fuel or catalytic reagent or by water, dirt or other contaminants in the fuel, oil or catalytic reagent.

Cummins is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs, and other losses resulting from a Warrantable Failure.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

* United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico, and the U.S. Virgin Islands.



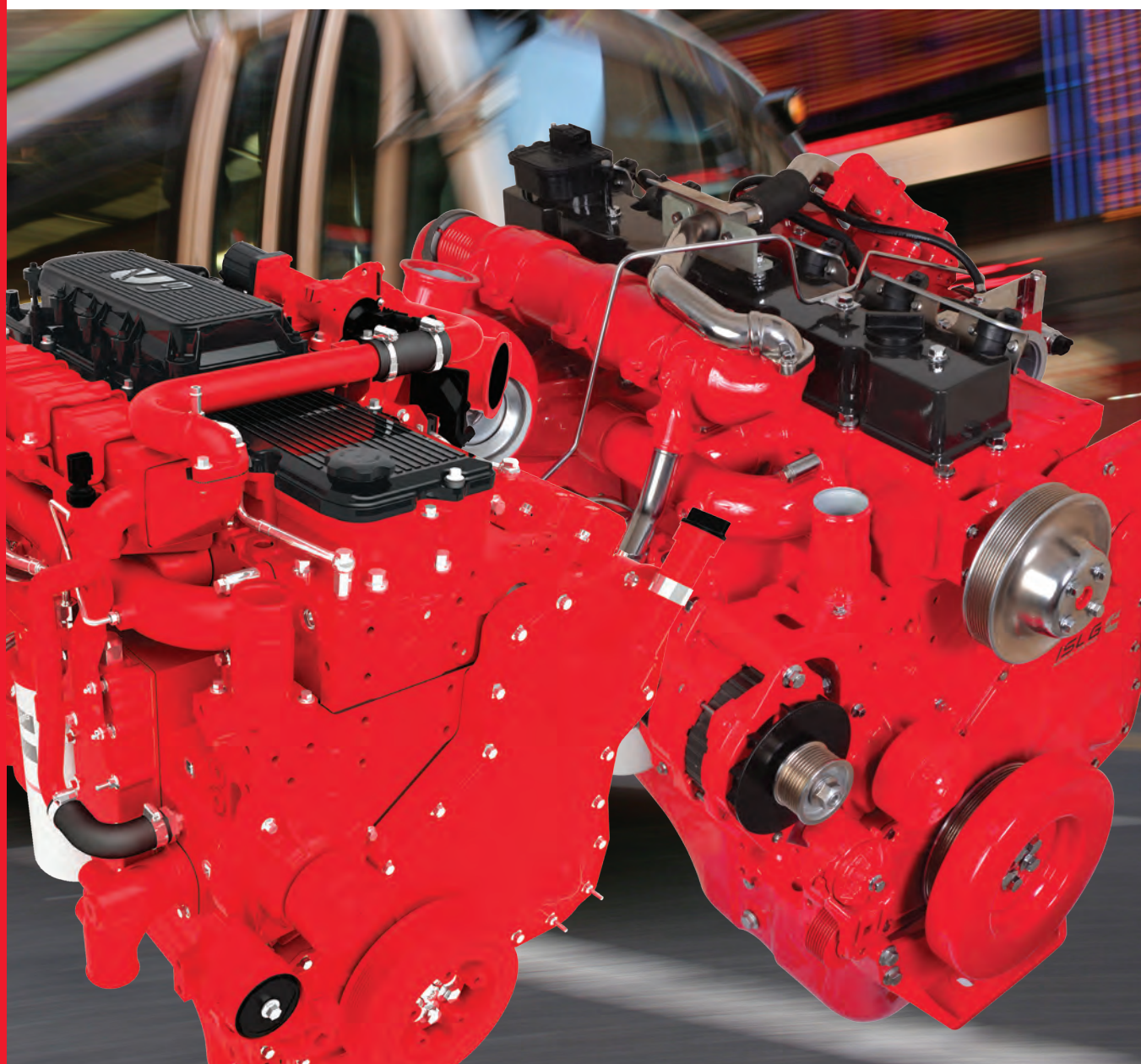
Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

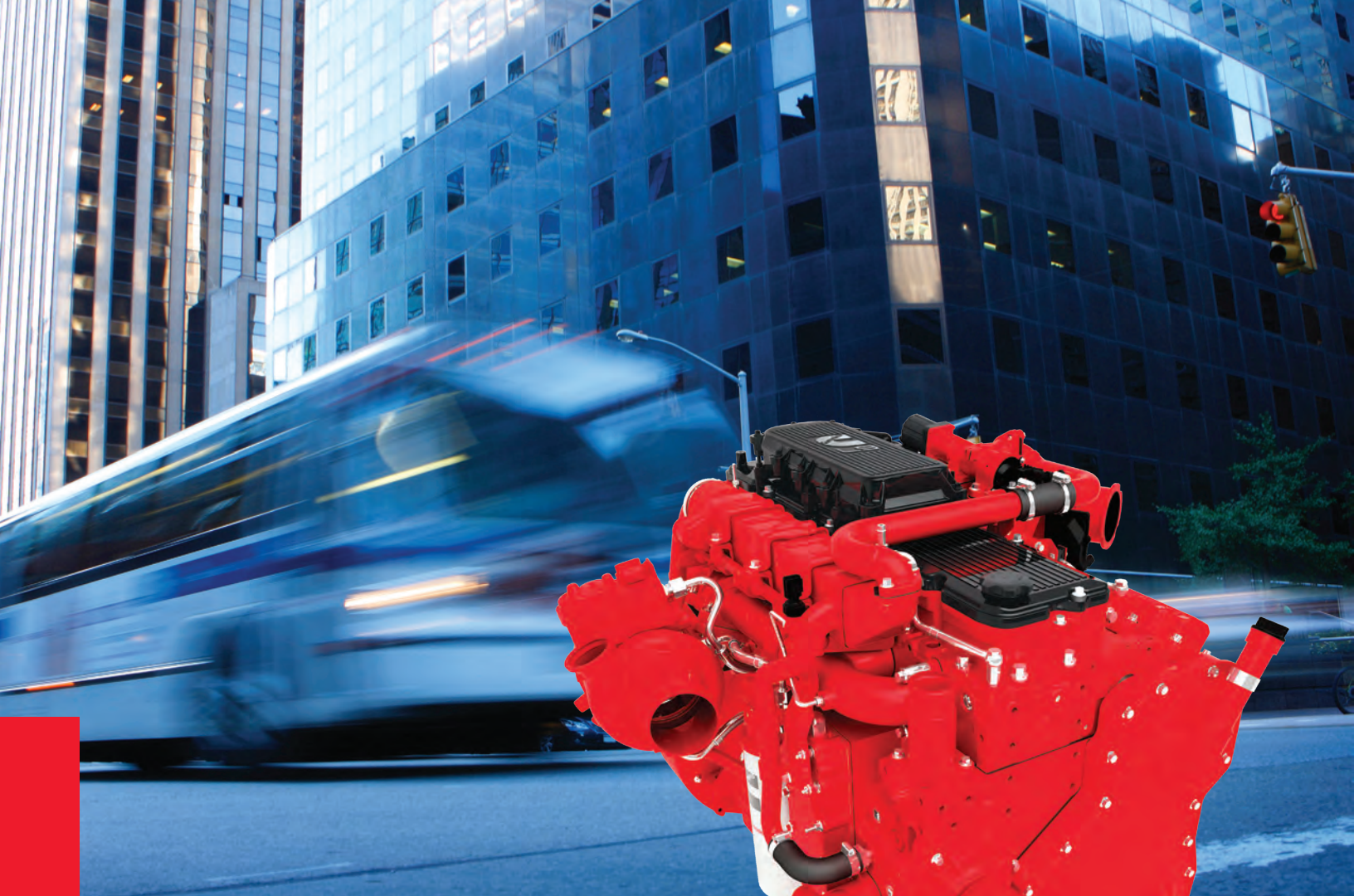
Bulletin 3381278
Printed in U.S.A. Rev. 01/06
©1999 Cummins Inc.



Smart Efficiency.™

Engines For Urban Transit
And Shuttle Applications.





Smart Efficiency.™

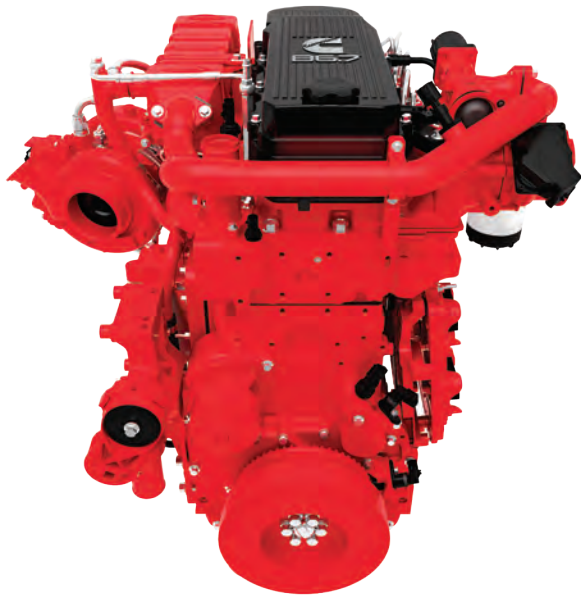
Cummins leadership in the urban transit and shuttle bus market is well established through the combination of proven performance and superior support capabilities that improve reliability while lowering the total cost of ownership.

Cummins full lineup of engines for this market ranges from diesel to natural gas engines to hybrid capable powertrains, from 200 hp to 380 hp (149-283 kW).

Manufactured at the Rocky Mount Engine Plant in North Carolina, the B6.7,™ L9™ and ISL G are Buy America-compliant.

All are backed by Cummins Care – the largest and most capable service and support network in North America, now with even more streamlined and efficient operations – at 1-800-CUMMINS™ (1-800-286-6467). Innovations for 2017 also include a SmartSupport™ proactive parts replacement program for the L9.

That combination of proven reliability, advanced technology, improved fuel efficiency and fueling options to meet every need have combined to make Cummins the No. 1 choice in U.S. urban transit fleets and shuttle operations every year.



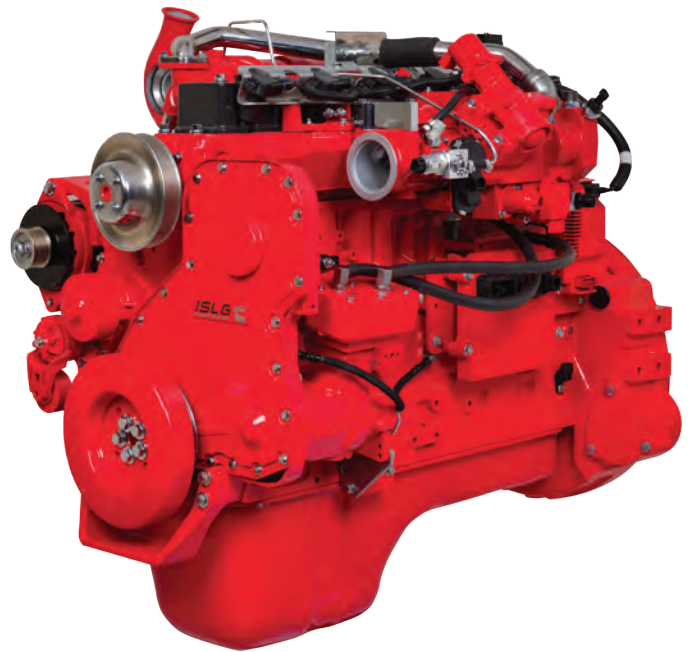
Clean Diesel Technology.

Cummins is a leader in the total integration of diesel engine and aftertreatment systems that operate at or below industry standards for near-zero emissions. We understand how different duty cycles impact engines in a different manner, and that the right technology matters.

B6.7 hybrid engines come equipped with Cummins Single Module™ aftertreatment system that combines Selective Catalytic Reduction (SCR) and a Diesel Particulate Filter (DPF) into a single unit. The Single Module weighs up to 30 percent less than the unit it is replacing, and takes up to 70 percent less space. The compact size allows it to be positioned closer to the engine, for better heat utilization, fewer regenerations and better fuel economy.



Cummins L9 diesel continues to use our proven modular aftertreatment system, because urban transit buses encounter some of the most severe operating conditions, with multiple stops over short distances, and constantly shifting through the gears. Larger buses require a larger aftertreatment capacity to maintain a high level of reliability and durability, which is why Cummins uses the switchback system for the L9.



Alternative Technologies. Natural Gas And Hybrid.

If you operate in a non-attainment zone or a city where air pollution and greenhouse gas (GHG) emissions are a major concern, Cummins has the alternative fuel options that you need. They include the B6.7 Hybrid as well as the ISL G and ISL G Near Zero (NZ) natural gas engines from Cummins Westport.



The ISL G and ISL G NZ operate using Stoichiometric-cooled Exhaust Gas Recirculation (SEGR), which utilizes every atom of oxygen in the combustion process. Oxygen-free exhaust allows the use of a maintenance-free Three-Way Catalyst (TWC) that never needs regeneration or cleaning. The ISL G NZ uses a larger catalyst with closed-crankcase ventilation and a specific engine calibration to reduce emissions to certified near-zero standards (.02 g NOx/bhp hr).

The B6.7 Hybrid uses a steady-state diesel engine to provide power to electric motors for propulsion – a combination that allows the engine to run at the optimum rpm for fuel economy and combustion efficiency.

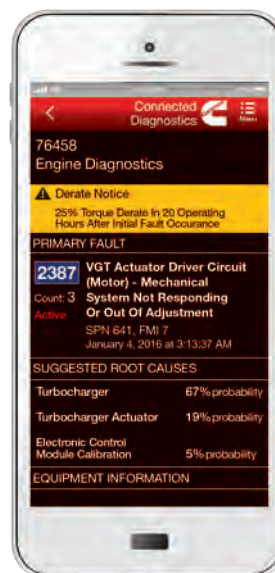


To provide unparalleled service and support for transit authorities, Cummins now offers the SmartSupport™ program, by which Cummins will proactively replace critical engine components to reduce unscheduled downtime for end customers. The proactive replacement will utilize Cummins Connected Diagnostics™ to keep transit fleets operating with maximum reliability and minimum downtime. SmartSupport is currently available on L9-powered transit applications, but will be cascaded through the lineup in the near future. Contact your local Cummins representative for updates.



The Lifeline For Your Engine.

Cummins Connected Diagnostics wirelessly connects your Cummins-powered transit and shuttle buses to product experts at Cummins. Available on 2007 and newer diesel and natural gas engines, Connected Diagnostics instantly transmits key data surrounding the event through your vehicle's existing telematics system to Cummins for immediate analysis.



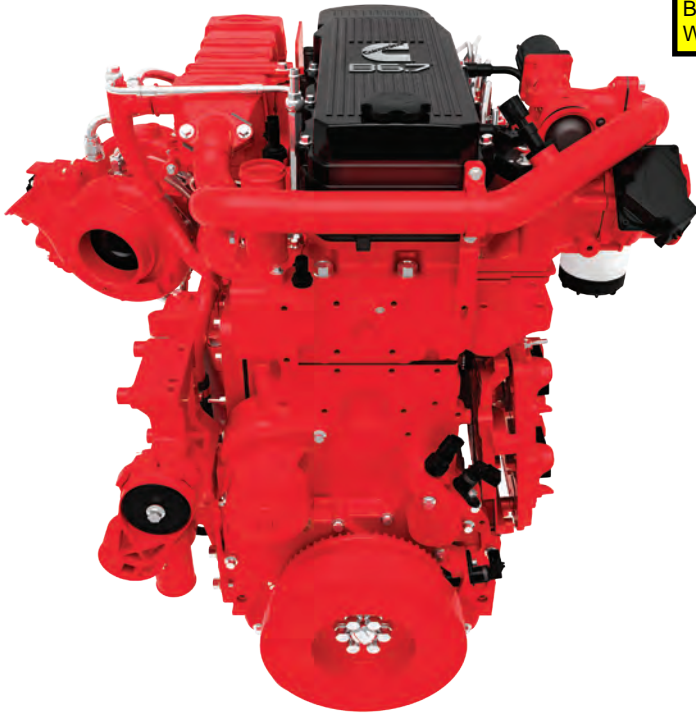
A notification based on the most probable cause is sent instantly to you via email or the free Connected Diagnostics mobile app, so you know exactly what action to take. That reduces guesswork and allows operators to safely proceed on their trip with the knowledge of the probable cause and information on when service can wait or if it needs to be performed immediately.

Key service event information that can be accessed using the Connected Diagnostics app includes the following:

- Derate notice banner
- Active and inactive faults
- Suggested root cause
- Derate notice details
- Possible performance impact
- Equipment information
- Cummins Service Locator
- Cummins contact information
- Current status of service events

Connected Diagnostics is designed to maintain complete service histories attached to each engine. Information about your transit or shuttle bus fleet is available on the Connected Diagnostics web portal anywhere you have Internet access. Learn more at cumminsengines.com/connected-diagnostics.

B6.7 Engine Provided to
WV DOT



B6.7TM

Building off of the ISB's proven lineage, the 2017 B6.7 incorporates several system enhancements, providing even better reliability and greater uptime. The VGT Turbocharger leverages the proven heavy-duty bearing system, for better reliability. Additionally, the B6.7 incorporates a Stage 1 NanoNet[®] fuel filter, for better water separation.

One of the most significant improvements is the use of the Cummins Single Module aftertreatment system, which provides up to a 70 percent reduction in space claim, reduces weight by up to 30 percent and provides better heat management and retention, for improved fuel economy.

B6.7 and B6.7 Hybrid Specifications

Advertised HP (Diesel)	200 HP-380 HP	149-283 kW
Advertised HP (HYBRID)	280 HP	209 kW
Peak Torque	660 LB-FT	896 N•M
Governed Speed	2600 RPM	
Clutch Engagement Torque	400 LB-FT	542 N•M
Number of Cylinders	6	
Engine Weight (Dry)	1,150 LB	522 KG

*Increase over standard muffler; does not include chassis OEM-supplied components.



B6.7TM HYBRID

Cummins B6.7 Hybrid is custom-designed to work in transit bus hybrid diesel-electric propulsion systems. Already in use throughout North America with millions of miles of proven performance, it is clean and reliable.

The B6.7 Hybrid system operates at consistent engine speeds and temperatures, providing a perfect match for the application of the Single Module aftertreatment system. In transit applications, the B6.7 Hybrid system provides up to 5 percent fuel-economy improvements compared with the 2013 ISB6.7 Hybrid. That is a result of an enhanced VGT turbocharger, reduced friction and better thermal management.



B6.7 and B6.7 Hybrid Transit Bus Ratings

Engine Model	Advertised HP (kW)	Peak Torque LB-FT (N•m) @ RPM	Governed Speed
B6.7 280	280 (209)	660 (896) @ 1600	2600 RPM

B6.7 Shuttle Bus Ratings

Engine Model	Advertised HP (kW)	Peak Torque LB-FT (N•m) @ RPM	Governed Speed
B6.7 300	300 (224)	660 (895) @ 1600	2600
B6.7 280	280 (209)	660 (895) @ 1600	2600
B6.7 260	260 (194)	660 (895) @ 1600	2600
B6.7 250	250 (186)	660 (895) @ 1600	2600
B6.7 240	240 (179)	560 (759) @ 1600	2600
B6.7 220	220 (164)	600 (813) @ 1600	2600
B6.7 220	220 (164)	520 (705) @ 1600	2600
B6.7 200	200 (149)	520 (705) @ 1600	2600

L9 Transit Bus Ratings

Engine Model	Advertised HP (kW)	Peak Torque LB-FT (N•m) @ RPM	Governed Speed
L9 330	330 (246)	1100 (1491) @ 1300	2200
L9 280	280 (209)	900 (1220) @ 1300	2200

L9 Shuttle Bus Ratings

Engine Model	Advertised HP (kW)	Peak Torque LB-FT (N•m) @ RPM	Governed Speed
L9 380	380 (283)	1250 (1695) @ 1400	2100
L9 370	370 (276)	1250 (1695) @ 1400	2100
L9 350	350 (261)	1150 (1559) @ 1400	2200
L9 350	350 (261)	1000 (1356) @ 1400	2200
L9 330	330 (246)	1000 (1356) @ 1400	2200
L9 300	300 (224)	860 (1166) @ 1300	2200
L9 270	270 (201)	800 (1084) @ 1300	2200
L9 260	260 (194)	720 (976) @ 1300	2200

ISL G And ISL G Near Zero Transit Bus Ratings

Engine Model	Advertised HP (kW)	Peak Torque LB-FT (N•m) @ RPM	Governed Speed
ISL G 320	320 (239)	1000 (1356) @ 1300	2200
ISL G 280	280 (209)	900 (1220) @ 1300	2200



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

Headquarters

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

February 16, 2021

Donall Hasty
Forest River: Elkhart Coach, Glaval Bus,
Starcraft/StarTrans Bus, Van, ElDorado-KS
Lone Star Van, Champion Bus
2367 Century Drive
Goshen, IN 46528

Re: TVM DBE Goal Concurrence/Certification Letter – Fiscal Year 2021

Dear Mr. Hasty:

This letter is to inform you that the Federal Transit Administration's (FTA) Office of Civil Rights has received Forest River's Disadvantaged Business Enterprise (DBE) goal and methodology for FY 2021 for the period of October 1, 2020–September 30, 2021. 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 firm's FY 2021 DBE goal and determined that it complies with DOT's DBE regulations. Your firm is 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 firm's compliance with DBE requirements when bidding on federally funded vehicle procurements.

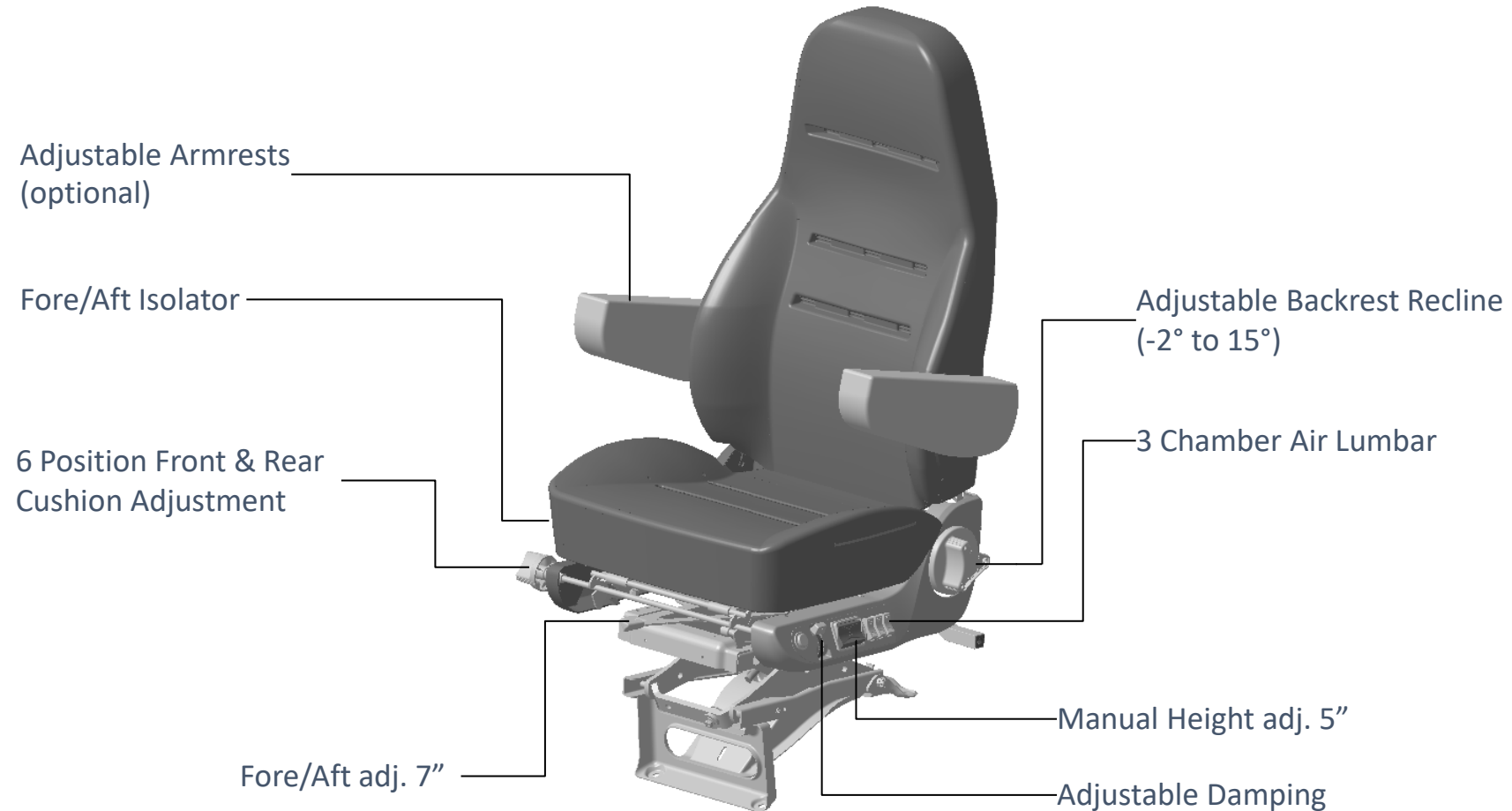
FTA reserves the right to remove/suspend this concurrence if your DBE program or FY 2021 DBE goal is not implemented in good faith. In accordance with this good faith requirement, you must submit your DBE Uniform Report to FTA by June 1, 2021. This report should reflect all FTA-funded contracting activity for the first period of FY 2021 (i.e., from September 1 to March 31).

Also note that your FY 2022 DBE goal methodology must be submitted to FTA by August 1, 2021. Any significant updates to the program plan must be submitted to FTA as they occur. If you have any questions, please contact the FTA DBE Team via email at FTATVMSubmissions@dot.gov.

Sincerely,

John Day
Program Manager
Office of Civil Rights

DTNA Proprietary Premium Seat



Passenger Seats Limited Warranty & Sales Terms

WARRANTY:

Freedman Seating Company warrants to the original buyer that its Passenger Seats are free from defects in material and workmanship for the following components:

Metal Components – Five (5) years

Plastic Components – Three (3) years

Moving Components – Three (3) years

Gas Shock Components – One (1) year

Upholstered Components (foam) – Three (3) years

Cover Warranty is for defects in the material or sewing and is limited to replacement covers.

- One (1) year for Level #1 in-stock FSC material and perforated vinyl

- Two (2) years for Level #3 in-stock FSC material and higher

- No warranty for COM (Customer Own/supplied Material)

The warranty period begins at time of the bus in-service date not to exceed 180 after the date of the shipment from Freedman Seating Company.

NON-PRORATED REPLACEMENT:

In the event that a warranty-covered failure should occur within the warranty period, Freedman Seating Company will repair or replace the seat without charge and without prorating, at Freedman Seating Company's option. This is the sole and exclusive remedy for breach of any warranty. Any replacement seat or part is only covered by this warranty for the remainder of warranty period applicable to the original seat.

EXCLUSIONS:

This warranty specifically excludes foam, upholstery material, seat belts, and items exposed to normal wear and tear such as metal finish and paint and does not apply to any seat that is damaged as result of accident, derailment, improper installation, structural defects, intentional damage, abuse, vandalism, negligence, misuse, improper operating conditions, lack of maintenance, or extreme natural phenomena. Seats exposed to toxic or corrosive materials are excluded from this warranty. Seats exposed to cleaning solutions that are not listed on the Freedman Seating Company Cleaning Guide are excluded from this warranty. This warranty is provided directly to the purchaser only and does not extend to any subsequent party and is solely for the Freedman Seating Company product as it is originally manufactured.

INCIDENTAL, CONSEQUENTIAL DAMAGES, & LIMITATIONS:

This warranty shall be in lieu of any other warranty or terms, expressed warranty or terms, expressed or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. The purchaser's sole and exclusive remedy against Freedman Seating Company shall be for the repair and replacement of the defective product as provided herein. No other remedy; including but not limited to incidental or consequential damages for lost profits, lost sales, injury to person or property, shipping, freight, installation, removal, or any other incidental or consequential loss shall be available to the purchaser.

NOTIFICATION:

All reports, claims, or notices required by the warranty to be provided to Freedman Seating Company must be in writing and delivered to: Attention – Freedman Seating Company, Warranty Claim Department, 4545 W. Augusta Blvd., Chicago, IL 60630. Repairs being claimed for warranty must be sent to Freedman Seating Company for prior approval and warranty acceptance before any warranty claims can be made. Parts being claimed for warranty must be sent to Freedman Seating Company for prior approval and warranty acceptance before any warranty claims can be made.

INSPECTION AND VERIFICATION:

The owner must provide access to the failed seat so that Freedman Seating Company's authorized representative can perform an on-site inspection. Alternatively, Freedman Seating Company may ask the owner to ship the failed seat to Freedman Seating Company's laboratory for inspection. Within 30 days of the inspection, either on-site or in the laboratory, Freedman Seating Company will render an opinion as to whether or not the claimed failure is covered by the warranty.

GENERAL MAINTENANCE:

Freedman Seating Company provides the proper maintenance and cleaning instructions on its web site www.freedmanseating.com. Warranty is contingent upon documented performance of recommended maintenance and service. All replacement parts should be recommended or authorized Freedman Seating Company components. Failure to purchase proper components will null and void the warranty.

DESIGN:

Freedman Seating Company reserves the right to modify parts and design specifications without notice as long as the seats meet general specifications, unless otherwise committed per contract. In case further non-conforming changes have to be incorporated, Freedman Seating Company will submit such changes to customer for prior approval.

OTHER:

The terms and warranty are contingent upon customers meeting agreed upon payment terms as specified in Freedman Seating Company proposals. Terms and warranty supersede any other terms including but not limited to customer terms printed on the back of Purchase Orders, listed on websites, or other sources from customers.

Warranty – Passenger Seats 1-09



S2C Cutaway Commercial Bus Chassis



Features & Benefits

- 1** Chassis is equipped with ADA (Americans with Disabilities Act) wiring which offers body builder interface connections, eliminating the need for OEMs to splice into chassis wiring.
- 2** Between-the-rails fuel tank offers superior protection from impact and clean frame rail sides for bus body needs.
- 3** Tuned suspensions and match-marked tires offer a superior ride compared to a traditional truck suspension.
- 4** S2C offers a 20% larger windshield for better visibility compared to the competition.
- 5** Offers 30% to 50% better driver's line of sight compared to the competition, reducing blind spots and potential hazards.
- 6** Low-effort, easy-tilt hood minimizes stress on the driver during inspections. Hood also offers a dampening device that minimizes rapid closure, reducing hood damage or potential injury to maintenance personnel.
- 7** 55-degree wheel cut offers improved maneuverability compared to the traditional truck cab configuration.
- 8** Cab offers floor- and firewall-mounted noise and heat abatement package for improved driver and passenger comfort.
- 9** S2C exceeds the "Buy America" requirements, giving you the confidence that your vehicle was made in America.
- 10** Standard frame-mounted, rollout battery tray with cover. Easier accessibility than a traditional under-step configuration.
- 11** Available dual TM-21 A/C compressors and large single alternator to handle bus needs.

STANDARD FEATURES AND OPTIONS: S2C

When it comes to making the most out of its time on the road, nothing compares to our all-new S2C.

S2C CUTAWAY CHASSIS

Engine	Cummins® ISB 6.7-200 200 hp @ 2,300 rpm, 2,600 GOV, 520 lb./ft. @ 1,600 rpm
Optional engines	Cummins ISB 6.7-220 220 hp @ 2,300 rpm, 2,600 GOV, 520 lb./ft. @ 1,600 rpm Cummins ISB 6.7-240 240 hp @ 2,300 rpm, 2,600 GOV, 560 lb./ft. @ 1,600 rpm Cummins ISB 6.7-250 250 hp @ 2,300 rpm, 2,600 GOV, 660 lb./ft. @ 1,600 rpm Cummins ISB 6.7-260 260 hp @ 2,300 rpm, 2,600 GOV, 660 lb./ft. @ 1,600 rpm Cummins ISB 6.7-300 300 hp @ 2,300 rpm, 2,600 GOV, 660 lb./ft. @ 1,600 rpm
Transmission	Allison® 1000 PTS with park pawl
Optional transmission	Allison 2100 PTS, 2200 PTS, 2500 PTS, 3000 PTS, B210, B220, B300
GVWR	19,500 lbs. to 33,000 lbs.
Alternator	Delco Remy® 160 amp, 28-SI
Optional alternator	Leece-Neville® 170 amp, 185 amp, 200 amp, 270 amp and 320 amp
Air conditioning	OEM dash A/C with Sanden SD-7 compact A/C compressor std; Dual Seltec TM-21 A/C compressors optional
Axles	
Front	Detroit DA-F-08.0-2, 8,000 lbs. FCI
Optional front axle	Detroit DA-F-10.0-3, 10,000 lbs.; DA-F-12.0-3, 12,000 lbs.
Rear	Detroit DA-RS 15-2, 15,000 lbs.
Optional rear axle	DA-RS-17.5, 17,500 lbs.; DA-RS-19.0-2, 19,000 lbs.; DA-RS-21, 21,000 lbs.
Suspension	
Front	Taper-leaf spring, 7,000 lbs.
Optional front suspension	Taper-leaf spring, 9,000 lbs., 10,000 lbs. and 12,000 lbs. ratings
Rear	52" Variable-rate multi-leaf spring, 12,500 lbs.
Optional rear suspension	52" variable-rate multi-leaf spring rear suspension with helper; 16,000 lbs., 19,000 lbs., 21,000 lbs. and 23,000 lbs. ratings; 23,000 lbs. AirLiner® air suspension with tuned Sachs® shocks with rear sway bar
Steering	TRW® tilt/telescoping steering column; TRW THP-45 or THP-60 steering gear; 55-degree wheel cut
Brakes	Bosch® hydraulic pin-slide disc brakes, front and rear WABCO® hydraulic ABS (4) channel
Optional air brakes	Bendix® air disc (front 22.5" wheel only); Meritor™ drum (front and rear)
Frame	5/16" x 3" x 10 1/8" 50 kpsi; 80 kpsi with rear air suspension
Wheelbase	179", 199", 219", 238", 259", 279", 300"
Fuel tank	60-gal. between the rails
Optional fuel tanks	100-gal. mounted between the rails; 65-gal. mounted right-hand side available
Tires	Goodyear® G647 RSS 245/70R 19.5" 14-ply
Optional tires	Goodyear or Michelin® 19.5" OR 22.5"
Dash	New automotive-styled, ergonomically designed dash; odometer/trip, hour/diagnostic/voltage display; LED backlights on switches and gauges offer solid-state design and longer life; integral driver cup holders
Wiring	Fully multiplexed electrical system with body-builder-ready electrical drop for ADA wiring
Hood	Torsion-bar-assisted for easy opening with minimal effort; composite headlamps with brighter beam pattern and integral turn signals
Bumper	Three-piece steel bumper; chrome option available
Battery box	Frame-mounted battery box with sliding tray; capable of holding dual 8 D batteries; optional available temporarily mounted
Select standards	<ul style="list-style-type: none"> - Daylight running lights - Standard cruise control and programmable high idle
Select options	<ul style="list-style-type: none"> - Center switch panel with cutouts for body-builder switches - Chrome grille and headlight bezels - T-handle shift lever with interlock

Call Freightliner Custom Chassis Corporation at (800) 545-8831, or visit us on the Web at freightlinerchassis.com.

9/14, FCC/MC-S-371. Specifications are subject to change without notice. Freightliner Custom Chassis Corporation is registered to ISO 9001:2008 and ISO 14001:2004.
©2014 Daimler Trucks North America LLC. All rights reserved. Freightliner Custom Chassis Corporation is a subsidiary of Daimler Trucks North America LLC, a Daimler company.

IMPORTANT BASIC COMMERCIAL BUS CHASSIS WARRANTIES

8/28/15

FCCC CHASSIS

VOCATION	APPLICABLE MODELS	BASIC DOMESTIC WARRANTY*		BASIC EXPORT WARRANTY*	
		(Whichever occurs first)		(Whichever occurs first)	
		Years	Miles (km)	Years	Miles (km)
SHUTTLE BUS, INTERCITY BUS, TOUR COACH, and TRANSIT BUS	MB65	3-yr	0 - 50,000 miles 0 - 80,000 km	2-yr	No Limit
	S2	3-yr	0 - 50,000 miles 0 - 80,000 km	2-yr	No Limit
	S2C	3-yr	0 - 50,000 miles 0 - 80,000 km	2-yr	No Limit
	XBA	3-yr	0 - 50,000 miles 0 - 80,000 km	2-yr	No Limit
	XBP	3-yr	0 - 50,000 miles 0 - 80,000 km	2-yr	No Limit
	XBR	3-yr	0 - 50,000 miles 0 - 80,000 km	2-yr	No Limit
	XBS	3-yr	0 - 50,000 miles 0 - 80,000 km	2-yr	No Limit

NOTES: *This chart is intended to be a guide. See manufacturer's warranty for all details outlining limitations.

"DTNA Connect" (formerly "Access Freightliner") Website is available to registered chassis owner for various specific information to include warranty info, recall bulletins, part#'s, drawings, and schematics.

See your local Freightliner Dealer for shop/service manuals , special tools, etc.

FCCC chassis are approved for export to Guam and Puerto Rico only. Chassis should be ordered for the appropriate domicile and approved for FCCC Export Warranty coverage through your OEM Account Manager.

**NEW VEHICLE LIMITED WARRANTY WARRANTY COVERAGE
DESCRIPTIONS & WARRANTY COVERAGE TABLES**

FCCC BUS CAB AND CHASSIS - COMMERCIAL

FCCC Bus Cab and Chassis - Commercial



Coverage ^a		
Description	Time ^b	Distance ^b
Basic Vehicle	3 Years	50,000 mi/80 500 km
Battery	1 Year	100,000 mi/161 000 km
Brightwork	6 Months	Unlimited
Corrosion	6 Months	Unlimited
Cab Corrosion/Perforation	3 Years	50,000 mi/80 500 km
Cab Structure	3 Years	50,000 mi/80 500 km
Crossmembers	5 Years	100,000 mi/161 000 km
Diesel Emission 2010 ^c	5 Years	100,000 mi/161 000 km
Frame Rails	5 Years	100,000 mi/161 000 km
GHG14 ^d (Light Heavy Duty Trucks)	5 Years	50,000 mi/80 500 km
GHG14 ^d (Medium Heavy Duty to Heavy Heavy Duty Trucks)	5 Years	100,000 mi/161 000 km
GHG14 ^d Tire	2 Years	24,000mi/38 400 km
Paint	1 Year	100,000 mi/161 000 km
Paint, Chassis	6 Months	Unlimited
Towing/Roadside Assistance ^e	1 Year	Unlimited
Front Axle	3 Years	36,000 mi/58 000 km
Rear Axle	3 Years	36,000 mi/58 000 km
Transfer Case	3 Years	36,000 mi/58 000 km
Transmission	3 Years	36,000 mi/58 000 km

DISCLAIMER: Failure to read or distribute this information does not provide exemption from compliance with the information contained herein.

**NEW VEHICLE LIMITED WARRANTY WARRANTY COVERAGE
 DESCRIPTIONS & WARRANTY COVERAGE TABLES**
FCCC BUS CAB AND CHASSIS - COMMERCIAL

Coverage ^a		
Description	Time ^b	Distance ^b
Detroit Front Axle (File Direct)		
Pre-Model Year 2011^f	3 Years	36,000 mi/58 000 km
Post-Model Year 2011^g	3 Years	Unlimited
Detroit Rear Axle (File Direct)		
Pre-Model Year 2011^f	3 Years	36,000 mi/58 000 km
Post-Model Year 2011^g	3 Years	Unlimited

a. Coverage may vary; check vehicle's actual warranty coverage online via OWL's *Coverage Info/Check Coverage* screen.

b. Time or distance, whichever comes first

c. Applies to vehicles equipped with EPA 2010 compliant diesel engines.

d. Applies to models 2013 and later domiciled in the United States, check actual warranty online via OWL's *Coverage Info/Check Coverage* screen for coverage listed as "GHG14..."

e. Up to a maximum of \$450 per occurrence.

f. Pre-Model Year 2011 Detroit Axle: Warranty coverage is determined by Gross Combination Weight Rating, road surface, and vocation. Please see www.ddcsn.com for specific coverage details.

g. Bus & Chassis - Custom Chassis: Warranty coverage is determined by Gross Combination Weight Rating, road surface, and vocation. Please see www.ddcsn.com for specific coverage details.

DISCLAIMER: Failure to read or distribute this information does not provide exemption from compliance with the information contained herein.

IMPORTANT BASIC COMMERCIAL BUS ENGINE WARRANTIES

8/10/15

CUMMINS ENGINES

VOCATION	APPLICABLE MODELS	STANDARD WARRANTY*		EMISSIONS WARRANTY*	
		(Whichever occurs first)		(Whichever occurs first)	
		Years	Miles (km)	Years	Miles (km)
SHUTTLE BUS, INTERCITY BUS, TOUR COACH, and TRANSIT BUS	ISB-6.7L	2-yr	No Limit	5-yr	0 - 100,000 miles 0 - 160,935 km
	ISL-9L	2-yr	No Limit	5-yr	0 - 100,000 miles 0 - 160,935 km

NOTES: *This chart is intended to be a guide. See manufacturer's warranty for all details outlining limitations.
Go to <http://cumminsengines.com/brochures.aspx?sMarket=59&sKeyword=warranty> for more info

See your local Cummins Dealer for shop/service manuals , special tools, etc.

IMPORTANT BASIC COMMERCIAL BUS TRANSMISSION WARRANTIES

8/11/15

Allison Transmission Warranty and Coverage Summary
Shuttle Bus, School Bus, Intercity Bus/Tour Coach, and Transit Bus
Freightliner Custom Chassis Corporation
August 7, 2015

Allison coverage for
transmissions supplied
on FCCC Chassis

w/ option to purchase
Allison ETC

VOCATION	APPLICABLE MODELS	STANDARD WARRANTY LIMITATIONS#		STANDARD WARRANTY + PARTNERSHIP COVERAGE LIMITATIONS*		STANDARD WARRANTY + EXTENDED TRANSMISSION COVERAGE (ETC) LIMITATIONS	
		(Whichever occurs first)		(Whichever occurs first)		(Whichever occurs first)	
		Years	Transmission Miles (km)	Years	Transmission Miles (km)	Years	Transmission Miles (km)
SHUTTLE BUS	B210, B220, B300, B400	2-yr	No Limit	2-yr	No Limit	5-yr	No Limit
	B500	2-yr	No Limit	2-yr	No Limit		
	1000PTS	3-yr	0 - 100,000 miles 0 - 160,000 km	3-yr	0 - 100,000 miles 0 - 160,000 km		
	2100PTS, 2200PTS, 3000PTS	3-yr	0 - 100,000 miles 0 - 160,000 km	4-yr	No Limit		
SCHOOL, CHURCH, PRISON or ACTIVITY BUS	1000PTS	3-yr	0 - 100,000 miles 0 - 160,000 km	4-yr	No Limit	5-yr	No Limit
	2100PTS, 2200PTS, 2500PTS, 3000PTS	3-yr	0 - 100,000 miles 0 - 160,000 km	5-yr	No Limit	n.a.	n.a.
INTERCITY BUS or TOUR COACH	B210, B220, B300, B400	2-yr	No Limit	2-yr	No Limit	5-yr	No Limit
	B500	2-yr	No Limit	5-yr	No Limit	n.a.	n.a.
TRANSIT BUS	B210, B220, B300, B400, B500	2-yr	No Limit	2-yr	No Limit	5-yr	No Limit

NOTES: Buses requiring PTO and all revenue-generating/FTA transit bus applications must use "B" (Bus) series transmissions.
All shuttle bus applications greater than 33,000 lbs GVW require B300 or B400 transmissions.

*This chart is intended to be a guide. See manufacturer's warranty for all details outlining limitations.
Go to <http://www.allisontransmission.com/transmissions> for more info.

See your local Allison Dealer for shop/service manuals, special tools, etc.



Gateway



INTERMOTIVE
VEHICLE
CONTROLS

An ISO 9001:2015 Registered Company

Gateway

High Idle and Shift Interlock System

Overview

- All-in-one wheelchair interlock and high idle system to ensure full functionality of the vehicle's systems while using the lift
- Provides battery charge protection and improves air conditioning performance
- System is fully compliant with FMVSS 403/404 and the Americans with Disabilities Act (ADA) for wheelchair lift interlocks
- Simple plug and play connections to the OEM chassis

Features

- Prevents vehicle movement while the lift is in use by locking the shifter in Park
- Monitors OEM sensor inputs from the transmission, engine, charging system and ambient air temperature
- Programmable RPM for high idle
- Prevents driving with the park brake set
- Can provide real-time chassis data
- Diagnostic trouble codes available
- Optional BrakeMax add-on: automatically places vehicle in "tow haul" mode for reduced brake wear
- Uses Intermittent Fault Filter™ (IFF) technology to eliminate erroneous lift door signals

Product features may vary by make, model or year. See instructions for complete details.

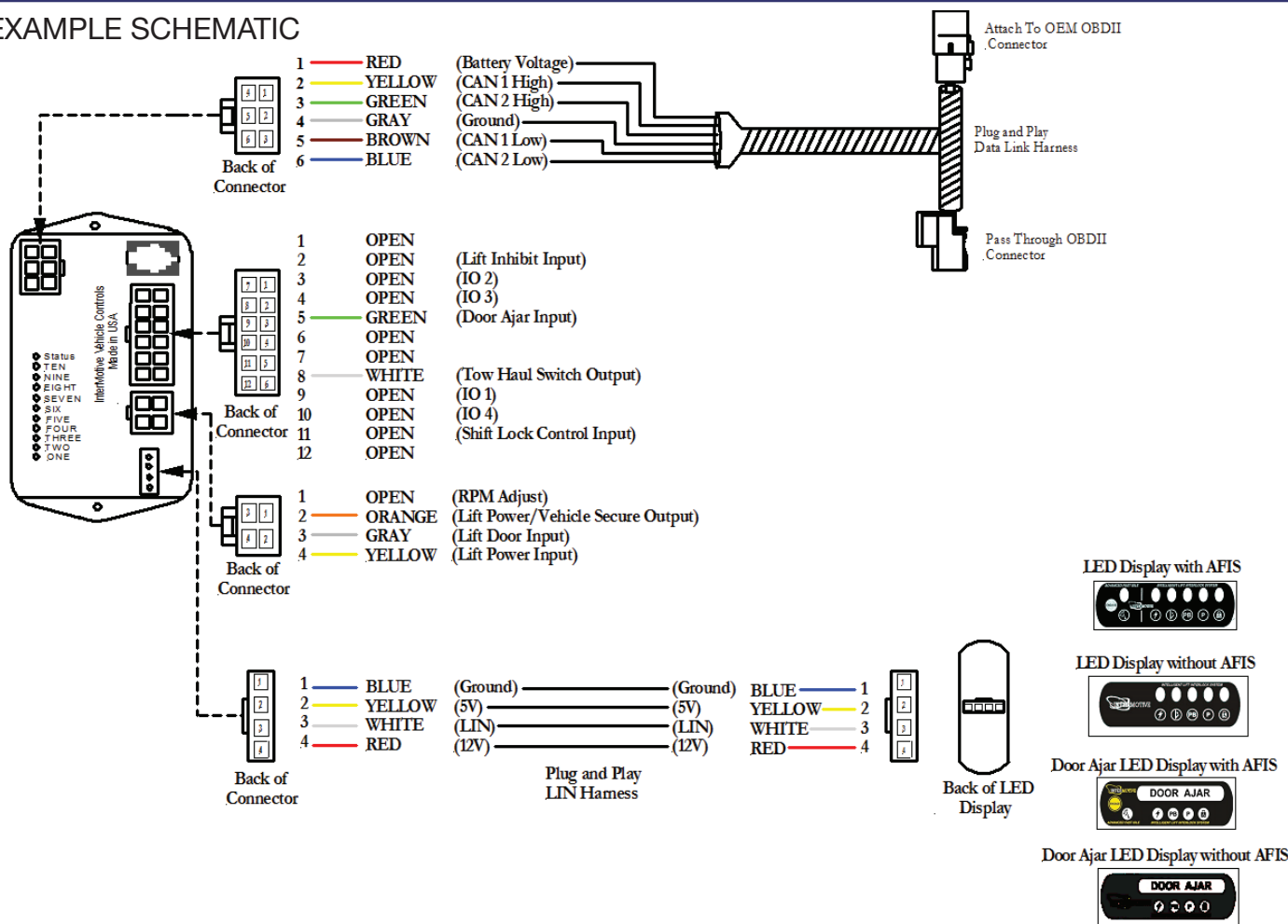
Proudly distributed by

LGS GROUP
AUTOMOTIVE TECHNOLOGIES

(775) 831-2002

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Five inputs (lift inhibit, door ajar, shift lock, lift door and RPM adjust)
Number of Outputs	Four configurable outputs, plus one lift power/vehicle secure output and one tow haul switch output
Current Draw	~120 mA
Quiescent Draw	~2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4" L x 2" W x 1" H



AM|FM|CD Stereo
JBR550



PRODUCT FEATURES

- Maximum power output: 160 watts (40W x 4)
- Front 3.5 mm AUX input
- CD player with 40 second Electronic Skip Protection (ESP)
- CD player functions: Intro, Repeat, Random
- Single disc CD/CDR/CDRW playback
- Selectable electronic AM/FM (US tuner only)
- Electronic control for volume/Bass/Treble/Balance/Fader
- Time/frequency display selector (T/F)
- Manual up/down and seek tuning
- Integrated PA microphone input
- Rear AUX audio input (RCA left/right)
- Large, user friendly controls and buttons
- Positive LCD display
- Fixed front face
- Built-in clock
- Mute

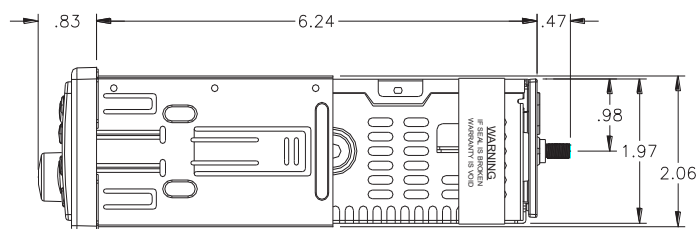
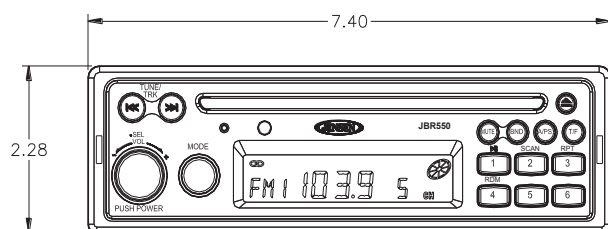
asa
ELECTRONICS
2802 Marina Drive • Elkhart, IN 46514
www.asaelectronics.com

DESIGNED TO MOVE [YOU][™]



AM|FM|CD Stereo

JBR550



Specifications

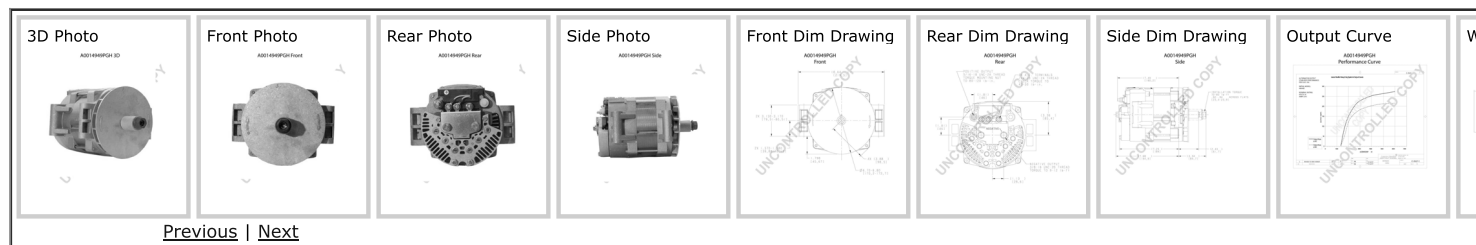
General Specifications

Power System		12 VDC
Operating Voltage Range		10 V to 16 V
Current Draw @ 12V	Idle	1.3 mA
	Nominal	0.822 A
	Maximum	8.40 A
Operating Temperature Range		-4°F to 149°F -20°C to 65°C
Storage Temperature Range		-22°F to 158°F -30°C to 70°C
Maximum Relative Humidity		95%
Overall Dimensions		7.5" L x 7.4" W x 2.3"H
Product Weight (unpackaged)		3.5 lbs.

Performance Specifications

FM Sensitivity		5 uV
AM Sensitivity		50 uV
CD Frequency Response		20 Hz to 20 kHz
CD Signal to Noise		>70 dB
CD Skip Threshold (Random Freq. Profile)		1.5 g
Compatible CD Formats		Audio CD, CD-R, R/W
Output Power	RMS	4 x 15 W
	Maximum	4 x 40 W
Total Harmonic Distortion @ 1 Watt		<1%
Applied Test Suite		ASA ES0001
Regulatory Certifications		FCC Part 15B

A0014949PGH - High Output Alternator



Product Specifications

Spec	Value
Item number	A0014949PGH
Sales number	4949PGH
Series number	4800-4900
Special Note	Conditions Of Usage
Warning: Prestolite Products are not approved for Aviation applications!	
Notes	GENERIC HEX SHAFT.
System voltage	12
Output	270
Mounting style	PAD
Dimensions in	INCHES
Rotation	CLOCKWISE
Housing coating	RAW
UL Approved	No
Mounting bolt size	F .417-.427 R .489-.479
Positive stud size	5/16-18 UNC
Negative stud size	3/8-16 UNC
Rectifier location	INTERNAL
Shaft diameter	7/8 INCH
Excitation type	
Regulator location	Integral
Regulator number	R240105747
Diode trio	No
Pulley required	No
Lamp driver	No
Adjustable regulator	No
Remote sense	No
Smart check	No
Batteryless	No

Similar Product

We have another model that is equivalent to A0014949PGH	
A0014949PAH	

Availability

Region	Priority / Status
USA / Canada	Medium (B)

Product status

Status	Number
Equivalent to	A0014949PAH

Technical Bulletins

Title / Link	Description
4000 Series Maintenance Manual	Service manual for the 4000 series alternators with internal regulators and rectifiers TSM1001_4000_Series_Int_Reg_and_Rectifier_Service-Manual.pdf (5.8 mb)
4000 Series Maintenance Manual - French Language Version	French version of the 4000 Series internal regulator and rectified alternators service manual. TSM1001_FR_4000_Series_Int_Reg_and_Rectifier_Service-Manual.pdf (5.9 mb)
4000 Series Pad Mount Alternators Hardware	Hardware kit for the 4000 Series Pad Mount alternators. TSB-3005_4000PAD-hardware.pdf (1.6 mb)
4900 Series Rear Housing Configurations	Through-bolt changes on the 4900 series alternator rear housing configurations. TSB-1047_4900_T-bolt.pdf (467 kb)
Brush Inspection and Replacement Procedure	Brush inspection and replacement procedure for 2500, 2800, 4800 and 4900 series alternators TSB-1061_Brush_Insection_and_Replacement.pdf (668 kb)
Pad Type Mounting Recommendations	Recommended mounting and bracket design for pad mount alternators. TSB-1049_Pad_Type_Mounting_Recommendations.pdf (608 kb)
Wire Identification Chart For R240 Regulators	Wire Identification chart for R240 Regulators for 4800-4900 series alternators TSB-1134_R240_Regulator_Wire_ID_Chart.pdf (76 kb)

Parts Breakdown

Title / Link	Description
4000 Series Pad Mount Service Parts List	Service parts list for the 4000 series alternator pad mount models. SP1009-4000-Pad-parts-list-web.pdf (2.3 mb)

Literature

Title / Link	Description
4000 Series High Amp Alternators	4000 Series High Amp alternators for all applications. FL1165_4000_Series_Alternator_Flyer.pdf (645 kb)
4000 Series High Amp Fire Truck Alts	4000 Series high amp alternators for fire truck applications FL1162_4000_Series_FireTruck_Alternator_Flyer.pdf (1.7 mb)
School Bus Informational Flyer	Severe Duty Alternators and Starters that apply to the school bus applications School_Bus_Application_FL1212.pdf (N/A)

Numbers Our Customers Use

Company	Part number
BBB INDUSTRIES	90-04-7097
DAIMLER TRUCKS NORTH AMERICA	LN 4949PGH
MACK TRUCKS INC 2742	22899067
MACK TRUCKS INC 2742	5034-4949PGH
PACCAR PARTS	LN4949PGH
PETERBILT	4949PGH
PIERCE MANUFACTURING INC	3760504
TRUCK PRO	PD-4949PGH
VOLVO NORTH AMERICAN CORP.	LN 4949PGH

Cross Reference Numbers

Company	Part number	Comment
OSHKOSH TRUCK	3760504	

©Copyright 1996-2014 Prestolite Electric Inc

Important:

The information supplied could contain technical, typographical or other inaccuracies, and Prestolite assumes no responsibility for errors on this website or on other documents that are referenced by or linked to the publications on this site.

Questions regarding this information should be directed to the customer service division nearest you. Contact information can be found at our website at http://www.prestolite.com/pgs_contact/contact_0.php.

The PS/2



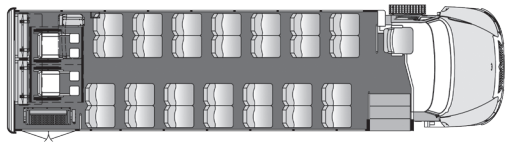
Quality Without Compromise

When you are looking for quality without compromise, the PS/2 from StarTrans Bus delivers. The PS/2, with its solid, steel cage frame, utilizes the same construction as other time-tested StarTrans models. Built on a Freightliner S2C chassis, this bus utilizes straight side wall construction and features a wide aisle to maximize shoulder space, offering a spacious and comfortable experience for your passengers.

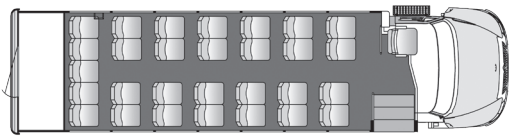


Meeting America's Transportation Needs
One Customer at a Time

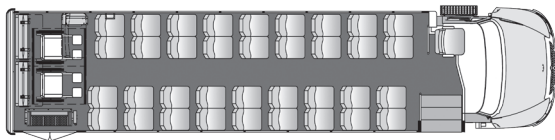
The PS/2



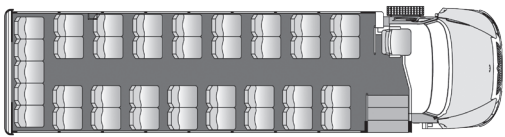
28 Passenger 2 Wheelchair with Flip and Foldaway Seats Plus Driver



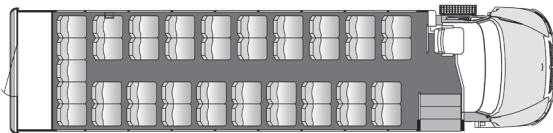
29 Passenger with Rear Luggage Plus Driver



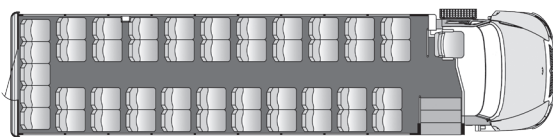
36 Passenger 2 Wheelchair with Flip and Foldaway Seats Plus Driver



37 Passenger Plus Driver



41 Passenger with Rear Luggage Plus Driver



45 Passenger Plus Driver



Industry Leading 5-Year/100K
Comprehensive Warranty

Standard Exterior Feature Highlights

- 96" wide exterior body
- Fully welded 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" wide x 36" high upper t-slider solid tempered safety glass windows with climate control tint
- Black powder coated steel rear bumper
- Rear mud flaps
- Fiberglass front and rear caps
- 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 LED reverse lights
- LED front and rear marker lights
- LED exterior skirt mounted entry door light

Standard Interior Feature Highlights

- 93" interior floor width
- 81" interior floor to ceiling height with standard flat floor
- Floor and wall seat track for flexible seating
- Black slip-resistant flooring
- 5/8" exterior grade plywood flooring
- Ceiling and rear wall fabric for sound abatement
- FRP (fiberglass reinforced plastic) sidewalls for ease of cleaning
- White step nosing
- 1.25" left hand vertical passenger assist rail at entry door
- Intermotive FlexTech Electrical System
- LED entry door step well lights
- LED driver and passenger area lighting
- Non-retractable seat belts

Popular Option Highlights

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



REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

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: Sonny Merryman, Inc.

Address: 5120 Wards Road

Evington, VA 24550

Telephone: 434-821-1000

Name: Sonny Merryman, Inc.

Address: 10149 Piper Lane

Bristow, VA 20136

Telephone: 703-331-5516

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

Name: Sonny Merryman, Inc.

Address: 5120 Wards Road

Evington, VA 24550

Telephone: 434-821-1000

Name: Sonny Merryman, Inc.

Address: 10149 Piper Lane

Bristow, VA 20136

Telephone: 703-331-5516

REQUEST FOR QUOTATION
Mid-Size – Medium Duty Cutaway Bus

BID FORM #2

CERTIFICATION FOR AIR & WATER POLLUTION

The Vendor certifies that the vehicles proposed:

ARE X 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.

6/29/2021

Date

Jordan T Wray

Authorized Signature

Commercial Sales Manager

Title

Sonny Merryman, Inc.

Company Name

REQUEST FOR QUOTATION
Mid-Size – Medium Duty Cutaway Bus

BID FORM #3

**DISADVANTAGED BUSINESS ENTERPRISE
VENDORS/ MANUFACTURERS CERTIFICATION**

(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.

6/29/2021

Date

Jordan T Wray

Authorized Signature

Commercial Sales Manager

Title

Sonny Merryman, Inc.

Company Name

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

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:

6/29/2021

Date


Authorized Signature

Sonny Merryman, Inc.
Company Name

Jordan T. Wray
Name

Commercial Sales Manager
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

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

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.

6/29/2021

Date


Authorized Signature

Commercial Sales Manager

Title

Sonny Merryman, Inc.
Company Name

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

BID FORM #6
U.S. Comptroller's Debarment List Certification

Sonny Merryman, Inc. _____ hereby certifies that it

_____ **IS or**

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

6/29/2021

Date

Jordan T Wray

Authorized Signature

Commercial Sales Manager

Title

Sonny Merryman, Inc.

Company Name

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

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.

Jordan T Wray Commercial Sales Manager
Signature and Title of Authorized Official

REQUEST FOR QUOTATION
Passenger Type, Dual Rear Wheel Van Non-Raised Roof

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.

6/29/2021

Date

Jordan T Wray

Authorized Signature

Commercial Sales Manager

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.**

- ☒ 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.

REQUEST FOR QUOTATION
Passenger Type, Dual Rear Wheel Van Non-Raised Roof

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 for a transaction covered by 31 U.S.C. 1352. The undersigned also understands that any person who fails to file 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.

6/29/2021
Date
Jordan T Wray
Authorized Signature
Commercial Sales Manager
Title

BID FORM #10

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

BID FORM #10

BID DOCUMENTATION CHECKLIST

Model Year: 2021/2022 Model: Startrans PS/2 /Freightliner

Bid Forms

- ☒ Bid Form #1: Locations of Technical Service Representatives and Parts Distribution Centers
- ☒ Bid Form #2: Certification for Air & Water Pollution
- ☒ Bid Form #3: Disadvantaged Business Enterprise Vendors/Manufacturers Certification
- ☒ Bid Form #4: Buy America Certification Rolling Stock
- ☒ Bid Form #5: Federal Motor Vehicle Safety Standards Certification
- ☒ Bid Form #6: U.S. Comptroller's Debarment List Certification
- ☒ Bid Form #7: Certification of Primary Participant Regarding
Debarment, Suspension, and Other Responsibility Matters
- ☒ Bid Form #8: Vendor's Certification of Understanding and Acceptance
- ☒ Bid Form #9: Certification of Restrictions on Lobbying
- ☒ Exhibit A Pricing Page

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

Documentation – to be submitted with bid:

Referenced

- ☒ 3.2 Engine: An ISB-10 Engine (6.7 liter) with EGR and Diesel Particulate Filter exhaust system – provide product description, warranty information and product literature.
- ☒ 3.2.8 High Idle System: provide product description, warranty information and product literature.
- ☒ 3.4 Transmission (separate cooling system): provide product description, warranty information and product literature.
- ☒ 3.5.4 Back Up Camera System: provide product description, warranty information and product literature.
- ☒ 3.10 Tires: provide product description, warranty information and product literature.
- ☒ 3.15.5 Alternator: provide product description, warranty information and product literature.
- ☒ 3.1.11 Water Testing: provide details of water testing procedures.
- ☒ 3.14 f. Exterior Vinyl Colors: provide samples/chart of available colors.
- ☒ 3.15 Undercoating and Rustproofing: provide product description, warranty information and literature.
- ☒ 3.16.2 Ambulatory Passenger Entrance/Exit: provide location, size, door operating details.
- ☒ 3.16.8 Stepwell Heater: provide product description, warranty information and product literature.
- ☒ 3.22 Floor Covering: provide samples of floor covering and colors to be provided.
- ☒ 3.27 Seating: provide product description, warranty information, product literature and color charts for all of the seating products to be utilized. **Proposed floor plans.**
- ☒ 3.27.11 Driver's Seat: provide description of product.
- ☒ 3.27.1 Exterior Mirrors: provide product description, warranty information and product literature.
- ☒ 3.19 Dual Purpose Safety Vent: provide product description, warranty information and product literature.
- ☒ 3.30 Wheelchair Securement System: provide product description, warranty information and product literature.
- ☒ 3.37 Strap/Buckle Storage: provide description and location of product.

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

- ☒ 3.31 Wheelchair Occupant Restraint System: provide product description, warranty information and product literature.
- ☒ 3.32 Wheelchair Lift: provide Make, Model #, product description, warranty information and product literature.
- ☒ 3.34 AM/FM Radio/CD: provide product description, warranty information and product literature.
- ☒ 3.39 Training: submit letter of understanding to the terms in this Section.
- ☒ 3.38.4 Fare box Provisions: provide description of proposed location-
- ☒ 3.38.1 Destination Signs: provide product description, warranty information and product literature.
- ☒ 3.38.5 PA System: provide product description and product literature.
- ☒ 3.21.15 Strobe Light: provide product description and product literature.
- ☒ 3.28.11 Security Cameras Only: provide product description, warranty information and product literature.
- ☒ 4.10 Security Camera System Including Playback: provide product description, warranty information and product literature.
- ☒ 4.15 Warranty on complete vehicle.
- ☒ 4.16 Warranty on Basic Vehicle Structure.
- ☒ 4.17.1 Warranty: warranties to be provided on subsystems and components.
- ☒ 6.1.2 Complete two (2) bids in binder form – one (1) marked for DPT.
- ☒ 10.2 A. Complete mechanical description of vehicle, its construction and equipment including manufacturer's model name and /or number. Include description of front and rear air conditioning and heat systems.
- ☒ 21 Proposed interior floor plans, showing detailed dimensions including the location of the wheelchair securement system and stanchions.
- ☒ 10.2 C. Curb weight (empty weight) and gross vehicle weight rating (GVWR) of vehicle.
- ☒ 10.2 D. Samples or paint charts of available exterior paint colors and vinyl.
- ☒ 10.2 H. Identification of the conversion location of the van.

REQUEST FOR QUOTATION
Passenger Type Dual Rear Tire Van (Non-Raised Roof)

- ☒ 10.2 I. A list of five (5) users names, addresses, emails, and telephone numbers who have been provided similar equipment by the Vendor.
- ☒ No Debt Affidavit
- ☒ Addendum Acknowledgement

STATE OF WEST VIRGINIA

Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: 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: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, 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: *[Signature]*Date: 6/28/2021State of VirginiaCounty of Campbell, to-wit:Taken, subscribed, and sworn to before me this 28th day of June, 2021.My Commission expires June 30, 2024

AFFIX SEAL HERE

NOTARY PUBLIC *[Signature]*

Purchasing Affidavit (Revised 01/19/2018)

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.

Jordan T Wray Commercial Sales Manager
(Name, Title)
Jordan T. Wray - Commercial Sales Manager
(Printed Name and Title)
5120 Wards Road - Evington, VA 24550
(Address)
434-485-8905 / 434-821-8203
(Phone Number) / (Fax Number)
jordan@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)

Mark D. Roberts Senior V.P.
(Authorized Signature) (Representative Name, Title)

Mark D. Roberts - Senior V.P.
(Printed Name and Title of Authorized Representative)

3/9/2021
(Date)

434-485-8603 / 434-821-8203
(Phone Number) (Fax Number)

REQUEST FOR QUOTATION
Mid-Size – Medium Duty Cutaway Bus

19. MISCELLANEOUS:

- 19.1 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.
- 19.2 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.
- 19.3 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: Jordan Wray

Telephone Number: 434-485-8905

Fax Number: 434-821-8203

Email Address: jordan@sonnymerryman.com

19.4 NOTIFICATION OF FEDERAL PARTICIPATION

Federal funding for this project is being provided by the Federal Transit Administration through various CFDA grants for 80% of the project cost. CFDA grants will be specified after award.

Exhibit A PRICING PAGE
Mid-Sized Medium Duty Transit Vehicles

VENDOR NAME: Sonny Merryman, Inc.

Manufacturer/ Brand: Startrans Bus PS/2 - Freightliner S2C

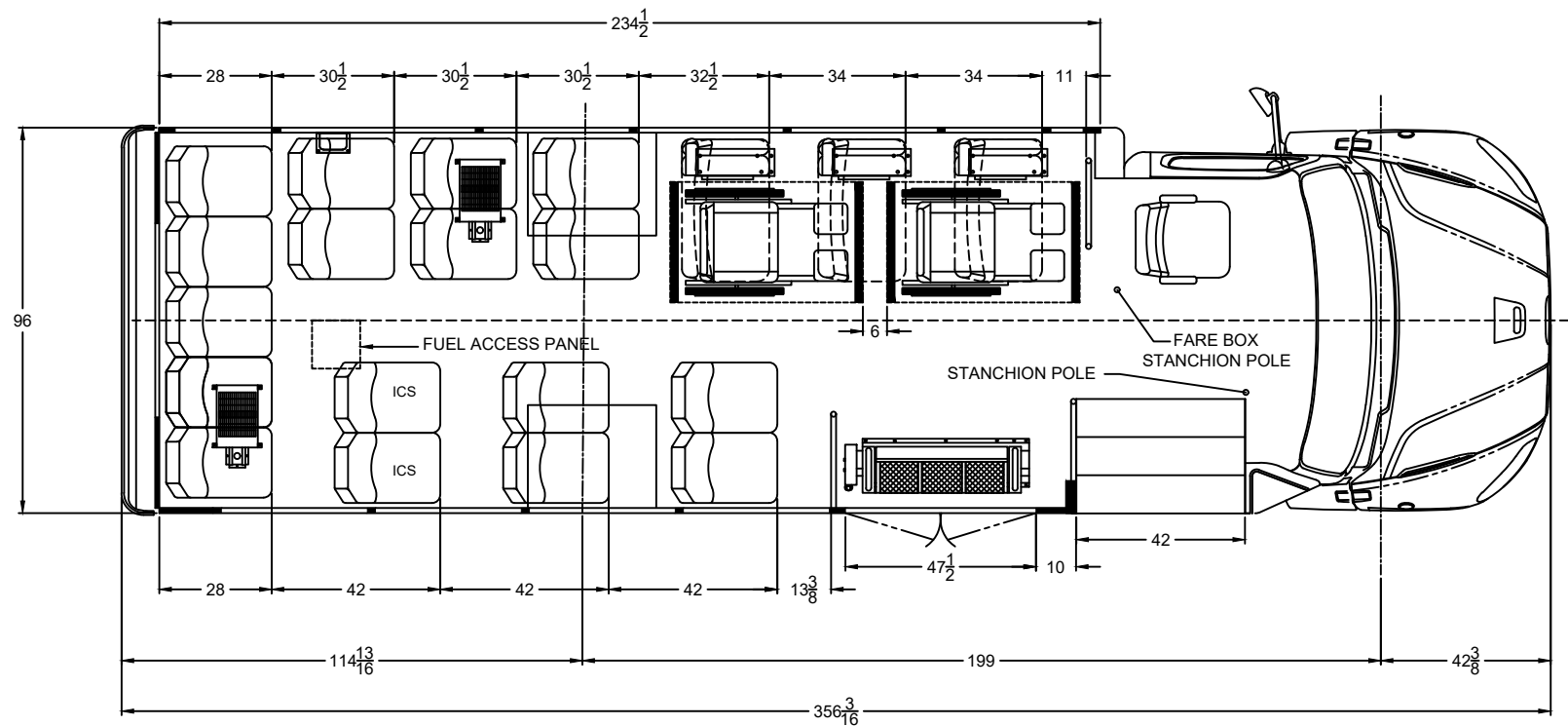
Class	Item Description	Unit Price Per Vehicle	Estimated Quantity	Extended Price
A	Bus; Rear Air Suspension	\$159,122.00	8	\$1,272,976.00
B	Bus; Rear Air Suspension; Extended length +4	\$162,170.00	8	\$1,297,360.00
C	Bus; Rear Air Suspension; Extended length +8	\$166,672.00	8	\$1,333,376.00
D	Bus, Automatic Tire Chain Devices; full bus paint	\$168,756.00	5	\$843,780.00
E	Bus, Automatic Tire Chain Device; Extended length +4, full bus paint	\$172,550.00	5	\$862,750.00
F	Bus, Automatic Tire Chains Device; Extended length +8, full bus paint	\$177,724.00	5	\$888,620.00
			TOTAL	\$6,498,862.00

**Complete Form provided.*

**Please note these are only estimated quantities and do not reflect any guarantee of purchase.*

**The WV DPT may purchase more or less as needed.*

Class A & D



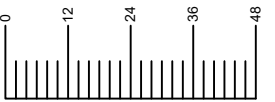
NOTE: SHOWN WITH MID BACK FREEDMAN SEATS
PRESIDENT S2 FREIGHTLINER 6.7D 26,000 GVWR
THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.
A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.
FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A
COMPLETED ORDER WITH ALL OPTIONS SHOWN.
OPTIONAL EQUIPMENT MAY BE SHOWN.
THE SALES ORDER PLACED DICTATES ACTUAL OPTION CONTENT.

DEALER APPROVAL

☐ APPROVED

CUSTOMER SIGNATURE

SCALE
IN INCHES



TOLERANCE UNLESS
OTHERWISE SPECIFIED

WOOD	OTHER
$\pm 1/8"$	$\pm 1/16"$
$\pm 1^\circ$	$\pm 1/2^\circ$

STARTRANS a division of Forest River, Inc.

DATE:	TITLE:
06/14/21	17 2 WC 199" WB 235" BDY MODEL 30
NAME: LDH	
DWG. No.	17 2 WC 3 DBL FOLDS 199 WB 235 BDY-6 USA

REV.
LET.

DESCRIPTION OF CHANGE

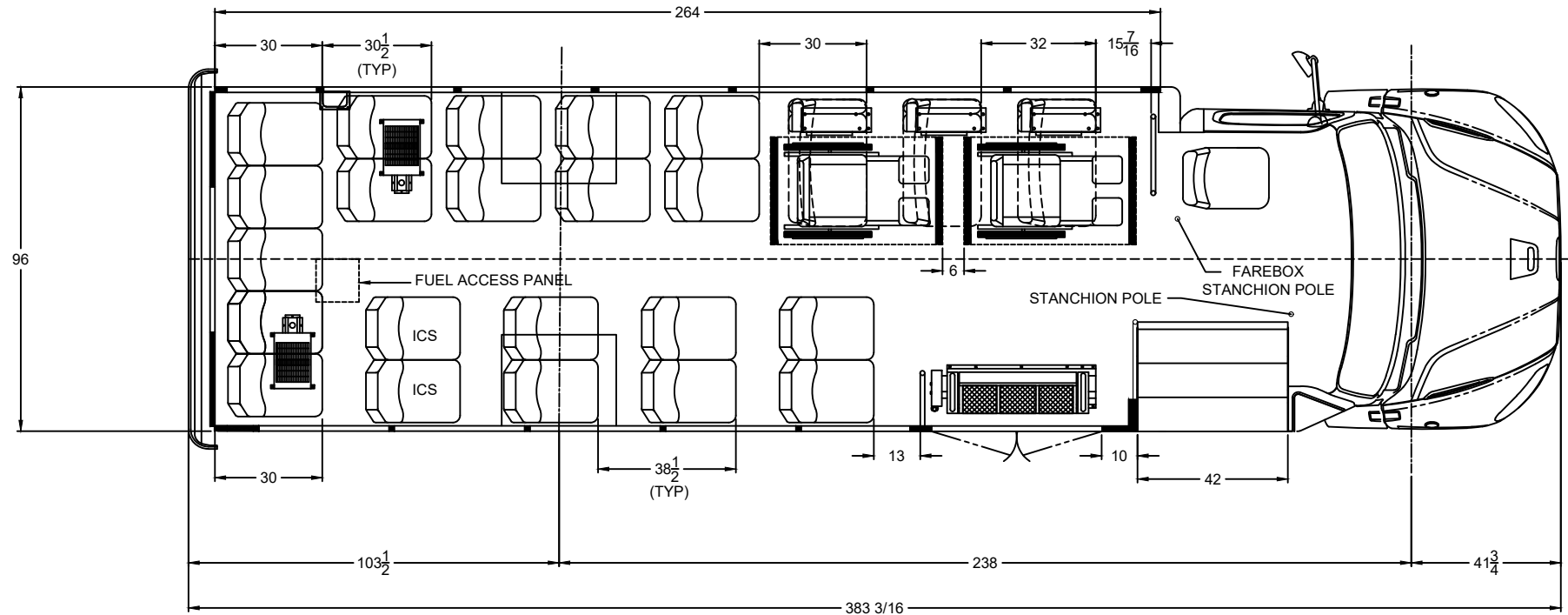
BY

CHK

DATE

ECN No.

Class B & E



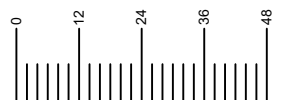
NOTE: SHOWN WITH MID HI FREEDMAN SEATS
 PRESIDENT PS2 25,900 GVWR
 THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.
 A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.
 FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A
 COMPLETED ORDER WITH ALL OPTIONS SHOWN.
 OPTIONAL EQUIPMENT MAY BE SHOWN.
 THE SALES ORDER PLACED DICTATES ACTUAL OPTION CONTENT.

DEALER APPROVAL

☐ APPROVED

CUSTOMER SIGNATURE

SCALE
IN INCHES



THIS DRAWING AND THE INFORMATION THEREON ARE THE EXCLUSIVE PROPERTY OF STARTRANS BUS, A DIVISION OF FOREST RIVER. IT SHALL NOT BE COPIED OR DUPLICATED IN ANY MANNER, NOR SHALL IT BE SUBMITTED TO OUTSIDE PARTIES FOR EXAMINATION WITHOUT OUR WRITTEN CONSENT. IT IS LOANED FOR USE WITH REFERENCE TO WORK UNDER CONTRACT WITH, OR PROPOSALS SUBMITTED TO STARTRANS BUS, A DIVISION OF FOREST RIVER.

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: 06/14/21

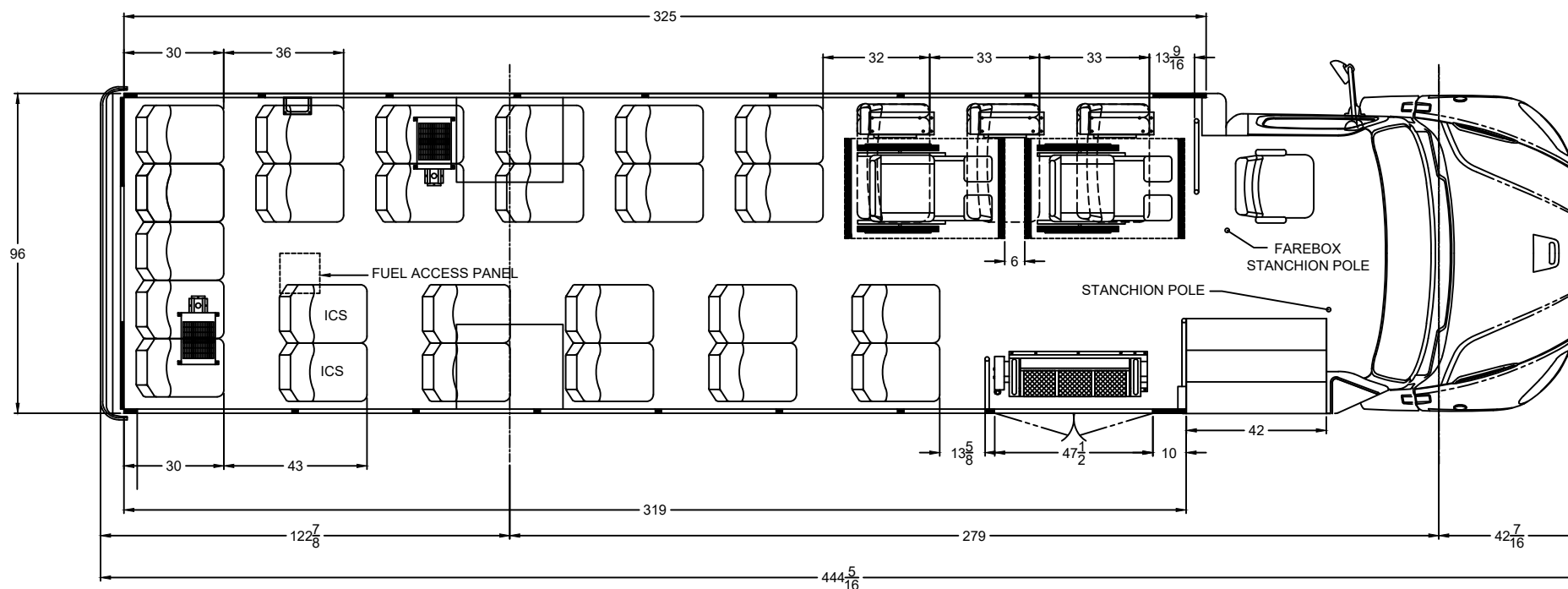
TITLE: 21 2 WC 238" WB 264" BDY

NAME: LDH

MODEL 32

DWG. No. 21 2 WC 3 DBL FOLD 238 WB 264 BDY-3 USA

Class C & F



NOTE: SHOWN WITH MID HI FREEDMAN SEATS
PRESIDENT PS2 FREIGHTLINER CHASSIS 96" WIDE
25,900 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.

DEALER APPROVAL

☐ APPROVED

CUSTOMER SIGNATURE

THIS DRAWING AND THE INFORMATION THEREON ARE THE EXCLUSIVE PROPERTY OF STARTRANS BUS, A DIVISION OF FOREST RIVER. IT SHALL NOT BE COPIED OR DUPLICATED IN ANY MANNER, NOR SHALL IT BE SUBMITTED TO OUTSIDE PARTIES FOR EXAMINATION WITHOUT OUR WRITTEN CONSENT. IT IS LOANED FOR USE WITH REFERENCE TO WORK UNDER CONTRACT WITH, OR PROPOSALS SUBMITTED TO STARTRANS BUS, A DIVISION OF FOREST RIVER.

REV.
L.F.T.

DESCRIPTION OF CHANGE

BY

CHK

DATE _____

ECN No.

TOLERANCE UNLESS
OTHERWISE SPECIFIED

WOOD

+ 1/8"

	+ 1°
--	------

OTHER

	+ 1/16"
--	---------

	+ 1/2°
--	--------



STARTRANS a division of Forest River, Inc.

DATE: 06/14/21	TITLE: 25/2 W/C 279" WB 325" BDY
----------------	----------------------------------

NAME: LDH	MODEL 36
-----------	----------

25.2 WC 3 DB FOLD S 270 225 3 USA

West Virginia – Warranty Service Locations

The Northern Panhandle:

Bus Body:

Sonny Merryman, Inc.
10149 Piper Ln, Bristow, VA 20136

Chassis:

TravelCenters of America - Valley Grove
270 W Alexander Rd, Valley Grove, WV 26060

ProAir A/C:

J & J Emergency Vehicle Sales
951 Point Marion Rd, Morgantown, WV 26508

Braun Wheelchair Lift:

Matheny Motor Truck Company
50 Matheny Lane, Mineral Wells, WV 26150
OR
Keystone Coach Works Inc
4786 Library Road, Bethel Park, PA 15102

Eastern Panhandle:

Bus Body:

Sonny Merryman, Inc.
10149 Piper Ln, Bristow, VA 20136

Chassis:

Freightliner of Winchester
227 Hopewell Ln, Clear Brook, VA 22624

ProAir A/C:

Sonny Merryman, Inc.
10149 Piper Ln, Bristow, VA 20136

Braun Wheelchair Lift:

Sonny Merryman, Inc.
10149 Piper Ln, Bristow, VA 20136

Central West Virginia:

Bus Body:

Sonny Merryman, Inc.
5120 Wards Road, Evington, VA 24550

Chassis:

Matheny Motor Truck Company
4125 1st Ave, Nitro, WV 25143

OR

Allied Freightliner LLC
1375 US-52, Kenova, WV 25530

ProAir A/C:

J & J Emergency Vehicle Sales
951 Point Marion Rd, Morgantown, WV 26508

Braun Wheelchair Lift:

Total Mobility Services Inc
146 Stricklin Road, Hurricane, WV 25526

Southern West Virginia:

Bus Body:

Sonny Merryman, Inc.
5120 Wards Road, Evington, VA 24550

Chassis:

Matheny Truck Center
322 Dry Hill Rd, Beckley, WV 25801

ProAir A/C:

Thermo King
137 Simmons Dr, Cloverdale, VA 24077

Braun Wheelchair Lift:

Total Mobility Services Inc
146 Stricklin Road, Hurricane, WV 25526

Sonny Merryman, Inc. – Customer References

Virginia Department of Rail and Public Transportation
Attn. Neil Sherman
804-786-1154
Neil.sherman@drpt.virginia.gov

Washington Metropolitan Area Transit Authority
Multiple contacts – contact for info
202-962-1234

Greater Richmond Transit Company
Attn. Tony Byrd
804-358-3871
Tony.byrd@ridegrtc.com

Capital Region Airport Commission
Attn. Folger Tuck
804-226-3000
ftuck@fyrichmond.com

General Services Administration (GSA)
Attn. Craig Yokum
703-605-9291
Craig.yokum@gsa.gov



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

State of West Virginia
Centralized Request for Quote
Vehicles

Proc Folder: 882993

Doc Description: Addendum No. 1 - Mid-Size Medium Duty Vehicles

Reason for Modification:

Addendum no. 1 is issued to publish a copy of the vendor's questions with responses and to extend the close date.

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2021-06-04	2021-06-30 13:30	CRFQ 0805 PTR2100000011	2

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code:

Vendor Name : Sonny Merryman, Inc.

Address :

Street : 5120 Wards Road

City : Evington

State : VA

Country : U.S.A.

Zip : 24550

Principal Contact : Jordan Wray

Vendor Contact Phone: 434-485-8905

Extension:

FOR INFORMATION CONTACT THE BUYER

Toby L Welch
(304) 558-8802
toby.l.welch@wv.gov

Vendor

Signature X

Jordan T Wray

FEIN#

54-0806176

DATE

6/29/2021

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

ADDITIONAL INFORMATION

Addendum No. 1 issued for the following reasons:

1. To Publish a copy of vendors questions with responses from the agency
2. To extend the close date to June 30, 2021 to allow vendors more time to submit bids.

no other changes

INVOICE TO

PUBLIC TRANSIT DIVISION
OF
BLDG 5 RM 650

1900 KANAWHA BLVD E
CHARLESTON WV
US

SHIP TO

PUBLIC TRANSIT DIVISION
OF
KANAWHA VALLEY
REGIONAL
TRANSPORTATION
AUTHORITY

1550 FOURTH AVE
CHARLESTON WV
US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Mid-Size Medium Duty Vehicles	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
25101502			

Extended Description:

Mid-Size Medium Duty Vehicles

Grand Total of Class A - G vehicles as per attached Exhibit A Pricing Page

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Technical Questions Due by 4:00 p.m.	2021-06-02

	Document Phase	Document Description	Page 3
PTR2100000011	Final	Addendum No. 1 - Mid-Size Medium Duty Vehicles	

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

SOLICITATION NUMBER: PTR2100000011

Addendum Number: #1

The purpose of this addendum is to modify the solicitation identified as ("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:

Addendum #1 is issued to modify the solicitation identified by the following:

1. To modify/extend the bid opening date to June 30, 2021 at 1:30 p.m.
2. To publish a copy of vendor's questions with the agency's response.

No other changes

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

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: PTR2100000011

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

Jordan T Wray

Authorized Signature

6/29/2021

Date

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

Revised 6/8/2012

CRFQ PTR2100000011

Vendor Questions

Q.1 On specification 3.8.8 – Please accept that there is no aftermarket rear end alignment available for the Freightliner chassis.

A.1 The Division understands and accepts there is no rear alignment available.

Q.2 On specification 3.11.1 - Please accept electrical schematics provided on a USB Flash Drive for each bus in lieu of printed & laminated copies.

A.2 The Division requests the printed and laminated copies due to the fact some of the receiving agencies may not be able to print them or have access to a flash drive reader.

Q.3 On specification 3.14.1 - Please accept our standard steel frame construction that is very similar to the specifications in the bid, but uses slightly different dimensions and gauges as an or equal.

A.3 The Division will accept the steel frame construction.

Q.4 On specification 3.14.3 - In lieu of primer paint, please accept that our steel cage is built with “aluminized steel”, which is steel that has been hot-dip coated on all sides with an aluminum-silicon alloy, like how zinc is applied to make galvanized steel. Aluminized steel is highly resistant to corrosion because the layer of aluminum and silicon keeps the underlying steel from oxidizing. This layer also keeps pit corrosion from occurring, especially during exposure to salts that affect most other metals. Aluminized steel is commonly used in exhaust components by several OEM’s, including Ford, because of its resistance to heat and corrosion. The steel cage is backed by a 5 year / 100,000 mile warranty against structural failure.

CRFQ PTR2100000011

Vendor Questions

A.4 The Division will accept the aluminized steel in stead of primer painting.

Q.5 On specification 3.14.4 - In lieu of painting all nuts, bolts, clips, washers, clamps and like parts, please accept zinc coated, nickel coated and stainless steel parts instead, as additional protection against corrosion.

A.5 The Division will accept the zince coated, nickel coateed and stainels steel parts in lieu of painting them.

Q.6 On specification 3.14.16 - Please accept that our interior and exterior panels (skins) are pressure laminated to the steel cage frame, in lieu of riveting or bolting, which provides a much cleaner look.

A.6 The Division will accept the interior and exterior panels are pressure laminated in lieu of riveting or bolting them to the frame.

Q.7 On specification 3.18.2 - Please accept our optional 42" entry door, which provides a clear opening between door leafs of 38" in lieu of 40".

A.7 The Division will accept the 42" entry door.

Q.8 On specification 3.18.2 & 3.18.8 - Please accept our standard Riser Step Height of 9.75" in lieu of 9.25".

A.8 The Division will accept the rister step height of 9.75".

Q.9 On specification 3.18.10 - Please note that this section says the wheelchair lift door is located behind the rear wheels, whereas the floor plans show it in front of the rear wheels.

CRFQ PTR2100000011

Vendor Questions

A.9 Correction, the Division is asking for the wheelchair lift door to be located in front of the rear wheels.

Q.10 On specification 3.23.17 - Please accept Optronics brand for all the LED exterior lighting, in lieu of Truck-Lite. Optronics is a major supplier of lighting products for small and medium size buses, and provides a lifetime warranty on its products.

A.10 The Division will accept Optronics brand lighting.

Q.11 On specification 3.24.5 In lieu of Talon Tread for the front entrance steps, please accept Altro's T36T step nosing with their yellow abrasive insert, as seen in the attached photo. We intend to provide Altro for all the floor covering.

A.11 The Division all accept Altro's T36T as equal on the step nosing.

Q.12 On specification 3.25.5 - The specification calls for vertical stanchion behind the rearmost passenger seat, but those seats are against the rear wall. Please confirm that no stanchion behind the rearmost seats is required.

A.12 The Division will remove Specification 3.25.5, vertical stanchions behind the rearmost passenger seats.

Q.13 On specification 3.27.11 - In lieu of the USSC 9100 ALX, which we are uncertain it is available for the Freightliner chassis anymore, please accept the National 2000 SRS Air Suspension seat in standard Black Modura cloth fabric that comes factory-installed with the Freightliner chassis.

A.13 The Division will accept the factory seat for the driver.

Q.14 On specification 3.28.11 - Please provide a camera layout for the Angel Trax system.

CRFQ PTR2100000011

Vendor Questions

A.14 The Division is asking for 6 cameras to be placed:

One out the front window, one facing the lift door, one facing the entry door, one facing the passengers, one facing the tie down area and one out the rear of the bus. The Division will allow multidirectional cameras as equal.

Q.15 On specification 3.32.11 - Wheel chair lift model is called out as NVL-1000-s Century Series. Per Braun Corp that model number is incorrect, please change to NCL-1000 or accept this as an equal.

A.15 The Division will change the wheelchair lift model to NCL-1000.

Q.16 On specification 3.34.1 - An OEM deluxe digital SYNC AM/FM and CD is called out. That is a Ford Chassis spec item. Please accept our optional radios as equal.

A.16 The Division is asking for a factory installed OEM radio.

Q.17 On specification 4.1 - Overall length (max) 342", please accept overall length of 355" for class A vehicle.

A.17 The Division will accept the overall length to be a maximum of 355"

Q.18 On specification 4.1 - Lower step to ground not more than 12", please accept 13" with the tire size called out in the specs.

A.18 The Division will accept the 13" distance from lower step to ground.

Q.19 On specification 4.6 - Can you please specify the differences between Class D and Class G bus specs?

A.19 The Division recognizes that Class D and Class G are the same, please disregard Class G.

Q.20 On specification 12.1 - Please accept delivery 150 days after receipt of chassis, in lieu of 150 days after receipt of order

CRFQ PTR2100000011

Vendor Questions

A.20 The Division will accept the request of 150 days of delivery after receipt of chassis.

Q.21 On specification 3.11.1 - Would (2) Digital Copy of the Uniform As Built Wiring Schematics on a USB drive be acceptable in place of (2) Laminated Copy?

A.21 The Division requests the printed and laminated copies due to the fact some of the receiving agencies may not be able to print them or have access to a flash drive reader.

Q.22 On specification 3.24.2 - Specifications call for RCA Transit Flooring, Altro, or equal. Please accept Gerflor Tarabus as an alternate to the specified Altro flooring. Gerflor's Tarabus flooring was designed and first introduced into the heavy-duty bus market with our 2.25mm thickness. The 2.25 mm, with its 100% pure PVC wear layer, has proven over the years to be very durable in the heavy-duty market. With the success in the heavy-duty market, this has carried over to the shuttle bus market with the 2.25 mm proving to be more than durable enough to last throughout the life cycle of a light and medium duty bus and the 12-year warranty on the Tarabus product line is longer than the average life cycle of a light/medium duty bus.

A.22 The Division will accept Gerflor Tarabus as equal.

Q.23 Please extend bid opening to Wednesday June, 30th at 1:30 PM EST to allow vendors ample time to review answers and accurately respond to the solicitation.

A.23 The Division will work with Purchasing Division to move the bid opening date to June 30, 2021.

Q.24 We request is that in addition to FMVSS 302, the seating be compliant with Docket 90-A, which is the Federal Transit Administration

CRFQ PTR2100000011

Vendor Questions

suggested fire safety criteria, and request the following modification for Seating requirements:

“Foam cushioning shall meet the flammability requirements of FMVSS 302 and the fire performance criteria within FTA Docket 90-A.”

“Foam cushioning shall be Neoprene Compound cushioning (CR Safeguard XL Fire-Resistant cushioning or equivalent).”

A.24 The Division will accept this request as to add Docket 90-A to the requirements.

Q.25 Is WV open to a change in tiedown system or does current fleet consistency remain a higher priority?

A.25 The Division is requesting that the tiedowns remain the same as specified to be able to change out items if necessary from other vehicles.

Q.26 Does Champion product need to be pull tested for use of these tiedowns?

A.26 The Division is requesting that the tiedowns remain the same as specified to be able to change out items if necessary from other vehicles.

Q.27 This bid appears to be fast tracked. Is there still time for AE's?

A.27 This contract is not being fast tracked.

Q.28 On specification 3.24 - In your current solicitation for medium duty vehicles, under section 3.24 – Floor and Floor covering, sub-section 3.24.4, you specify both RCA Transit Flooring and Altro. These are two different products. Sort of like gas verses diesel. Can you please clarify this? Should the builder quote with both or should their

CRFQ PTR2100000011

Vendor Questions

price allow the customer there choice?Should one be listed as an option?

A.28 The Division is asking for Altro flooring, or what is equal to it.

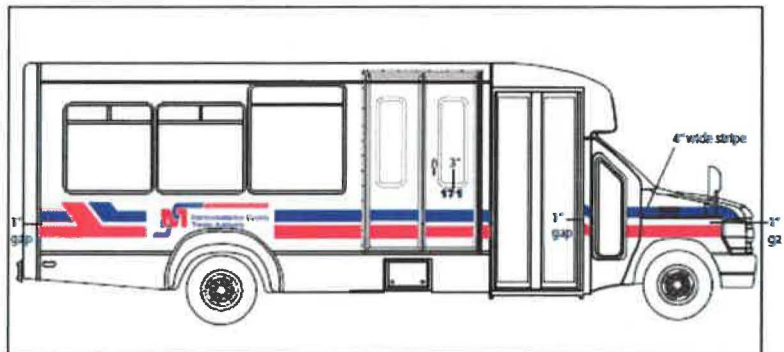
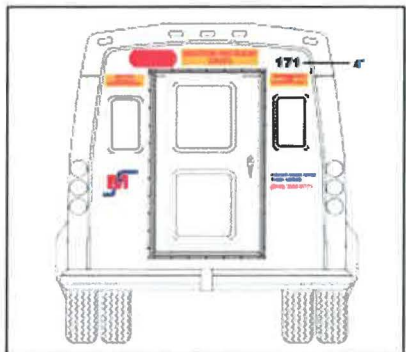
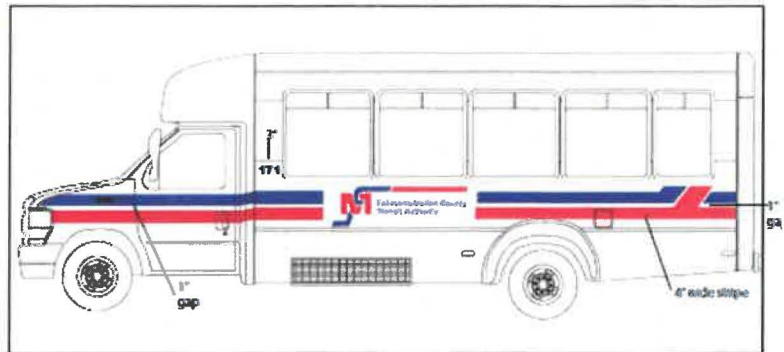
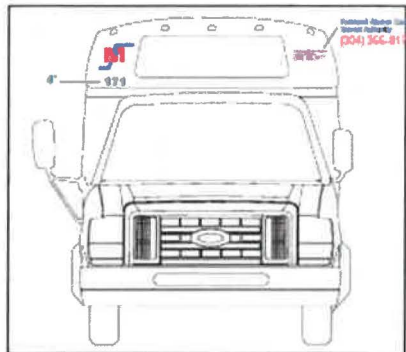
EXHIBIT B, VINYL LOGOS AND STRIPES

CENTRA



EXHIBIT B, VINYL LOGOS AND STRIPES

Fairmont-Marion County Transit Authority



* Graphic colors and placement are representative, the final product may vary. ■ 125 Wild Cardinal Red ■ 266 Patriot Blue ■ 2" White Conspicuity Tape

EXHIBIT B, VINYL LOGOS AND STRIPES

HERE & THERE TRANSIT



EXHIBIT B, VINYL LOGOS AND STRIPES

Ohio Valley Eastern Ohio Regional Transit



EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Bluefield Area Transit

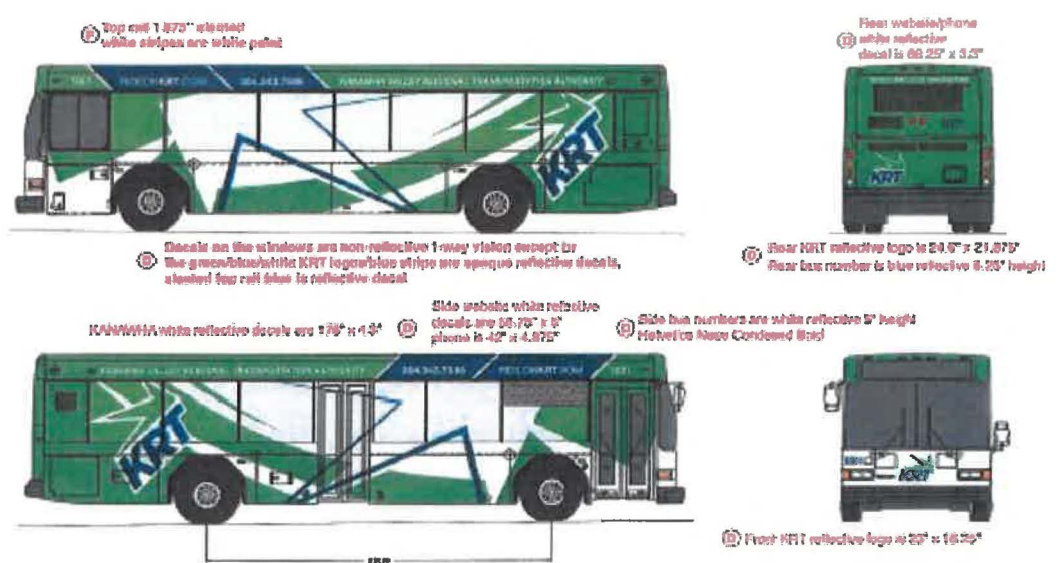


EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Buckwheat Express



Kanawha Valley Regional Transit Authority



CHARLESTON, WY	FAIRY (Axalta)	DECALS	Approval & Acceptance
(B) Low Floor, 95 feet by 162 inches Serial Numbers: 168384 - 168641 Bus Numbers: 1801 - 1880	White 735083-EX Green 832135-EX Black 0001-EX Safety White Service #307 - Hubs Cameras painted to match color me	White Reflective-680CR-10 Light Blue Reflective-680CR-78	Approved by: <u>Doug Hartley</u>
(Images, specifications and dimensions (L x W) may vary without representation of optimal viewing distance. Approx. Photo Scale 5/8" = 1')	Paint chip to cust: <input type="checkbox"/> Yes <input type="checkbox"/> NO Sales Ring CO Date sent: NA Approved: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO Paint Stand: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO Hard <input checked="" type="checkbox"/> Soft <input type="checkbox"/>	The green in the KRT logos are auto-painted on 680CR color matching the green paint Green #82135-EX The blue in the logo is: Light Blue Reflective-680CR-78	Title: <u>Asst General Manager</u> For: <u>KMRT</u> Date: <u>11/15/17</u> Rev: <u>3</u> Date: <u>11-17-17</u> PCO: _____

EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Eastern Panhandle Transit Authority



EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Potomac Valley Transit Authority

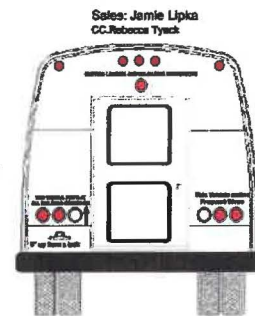
Paint Scheme form

Unit #



2" Conspicuity
Tape 1" below window

5" stripes
1" gap



2" Conspicuity Tape



9017/09

Vinyl Colors & Numbers

- 1.) # 140 Blue
2.) _____
3.) # Spectra Everglade Green

Customer Signature

Generic form

Robin Miller
(Graphics Dept.)

February 16,06

EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Little Kanawha Transit Authority



EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Tri-State Transit Authority



EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Mid-Ohio Valley Transit Authority



EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Tri-River Transit



EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Mountain Line Transit Authority



EXHIBIT C, EXAMPLES OF PAINT SCHEMES

New River Transit

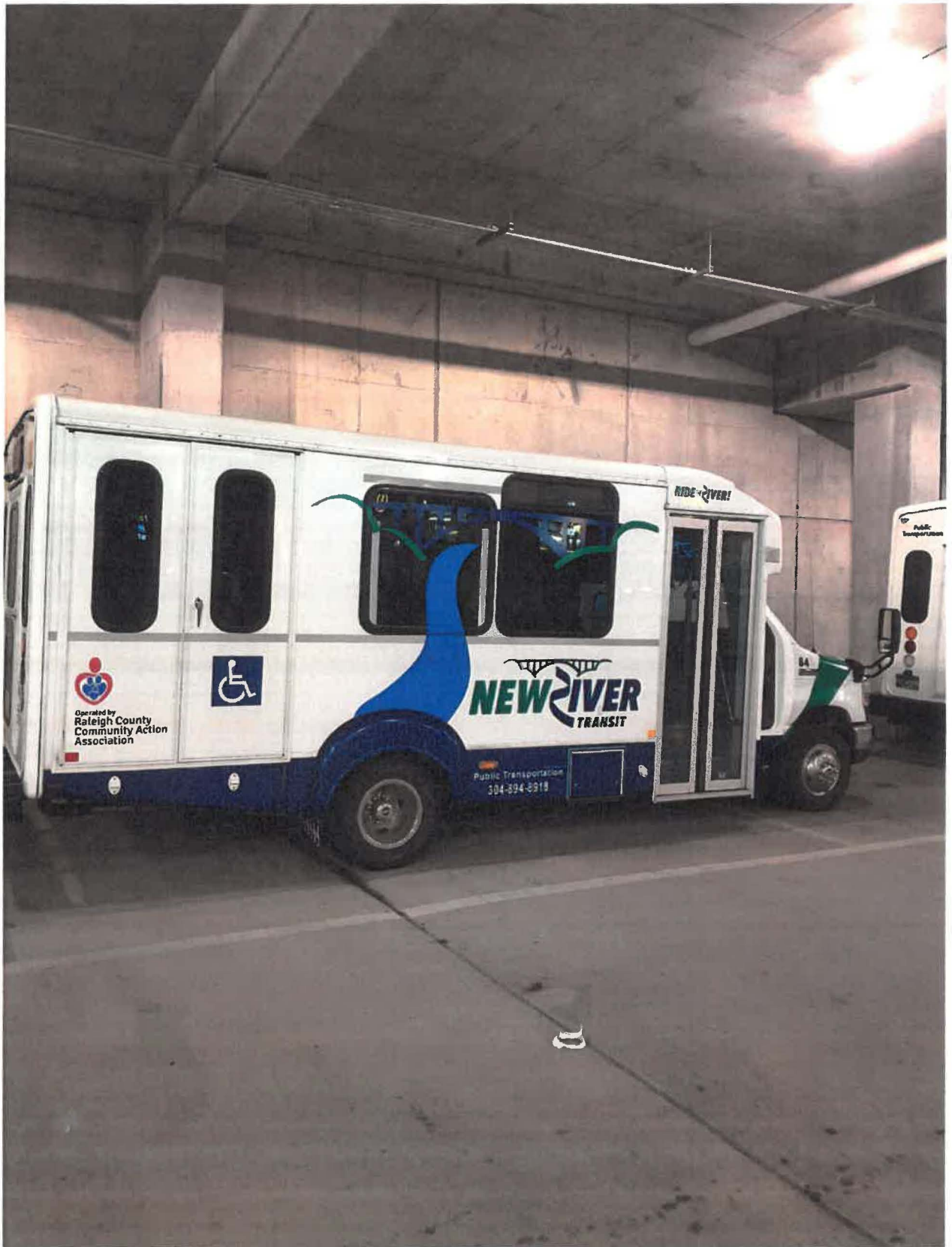


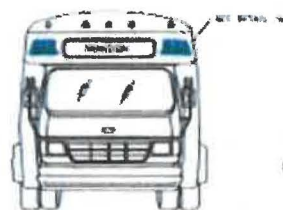
EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Mountain Transit Authority

Paint Scheme Mountain Transit Authority

[illegible]

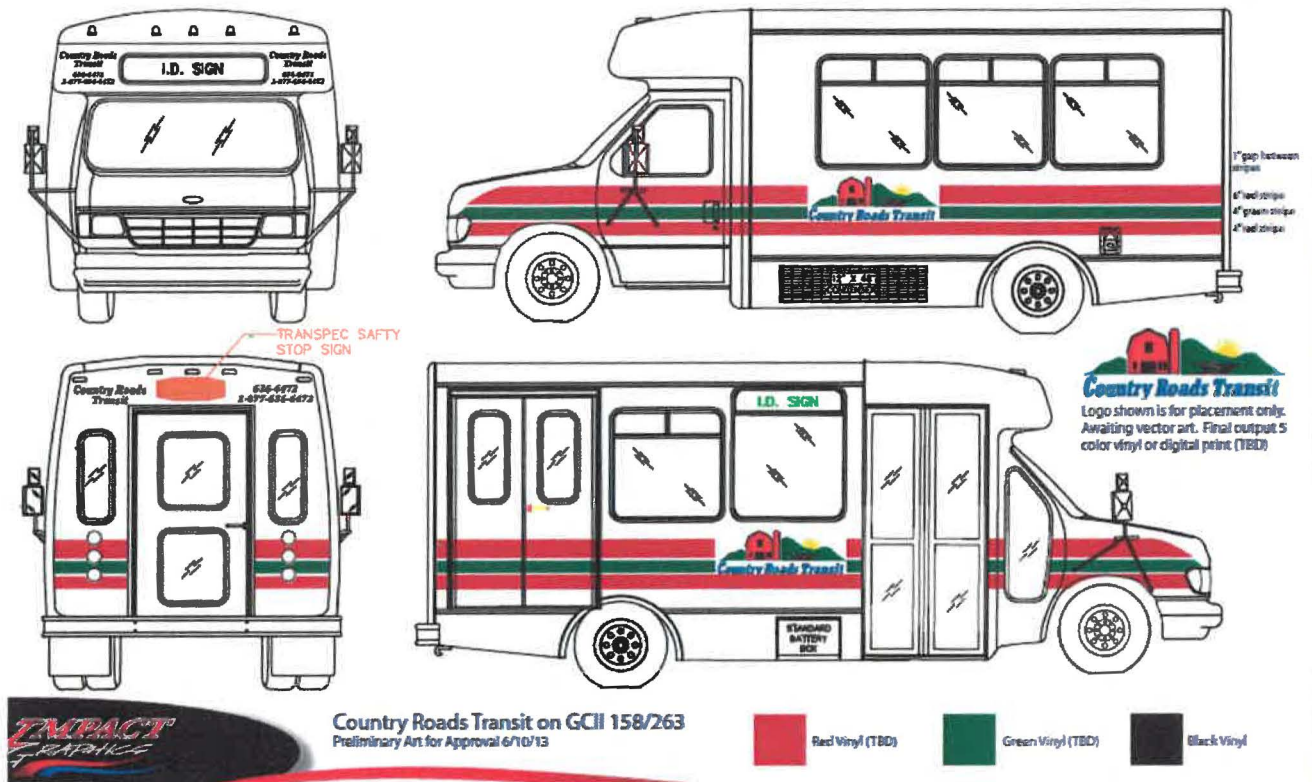
1. Full and complete for each of the following:



yellow
2406 yellow
yellow
yellow
2002
yellow

EXHIBIT C, EXAMPLES OF PAINT SCHEMES

Country Roads Transit





BODY FRAME CONSTRUCTION

The following information is submitted for all Startrans Bus products proposed on CRFQ 0805 PTR 2100000011 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.

3.0 Body Construction – General Frame Construction

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.

3.0.1 Floor frame construction and assembly –

- 3.0.1.1 Cross Members -- The floor cross members form the base structural support for the rest of the frame components. Our cross members are constructed of 11-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.
- 3.0.1.2 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.
- 3.0.1.3 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.
- 3.0.1.4 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.
- 3.0.1.5 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.

- 3.0.1.6 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.
- 3.0.1.7 Additional structure – When adding vertical stanchions, wheelchair 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 –

- 3.0.2.1 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.
- 3.0.2.2 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.
- 3.0.2.3 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 adds excellent side impact resistance.
- 3.0.2.4 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...
- 3.0.2.5 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 –

- 3.0.3.1 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 changes the configuration.



- 3.0.3.2 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.
- 3.0.3.3 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 –

- 3.0.4.1 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.
- 3.0.4.2 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 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.

3.0.5 Driver Compartment Overhead Halo –

- 3.0.5.1 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.
- 3.0.5.2 11 Gauge Aluminized steel – formed to make brackets used to mount to the chassis roof.

3.0.6 False Floor (Cab to body transition) –

- 3.0.6.1 Aluminized steel Tubing – 2” x2” (taller when needed) 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.
- 3.0.6.2 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 –

- 3.0.7.1 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.

3.0.8 Entry Door & Step Assembly Frame –

3.0.8.1 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.

3.0.9 Entry Door/Step Assembly –

3.0.9.1 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 then 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
32-28-0009-11

ROOF FRAME
32-28-0027-15

DRIVERS SIDEWALL
32-28-0022-12

DETAIL A
SCALE 1 / 4

PASSENGER SIDEWALL
32-28-0012-12

FRONT CAB OVERHEAD
32-30-0020-12

BATTERY SLIDEOUT TRAY
31-28-0950-14
FLOOR FRAME
32-28-0004-12

FALSE FLOOR FRAME
32-30-0019-12


ENTRYWAY ASSEMBLY
32-30-0014-12

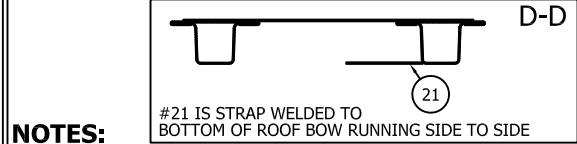
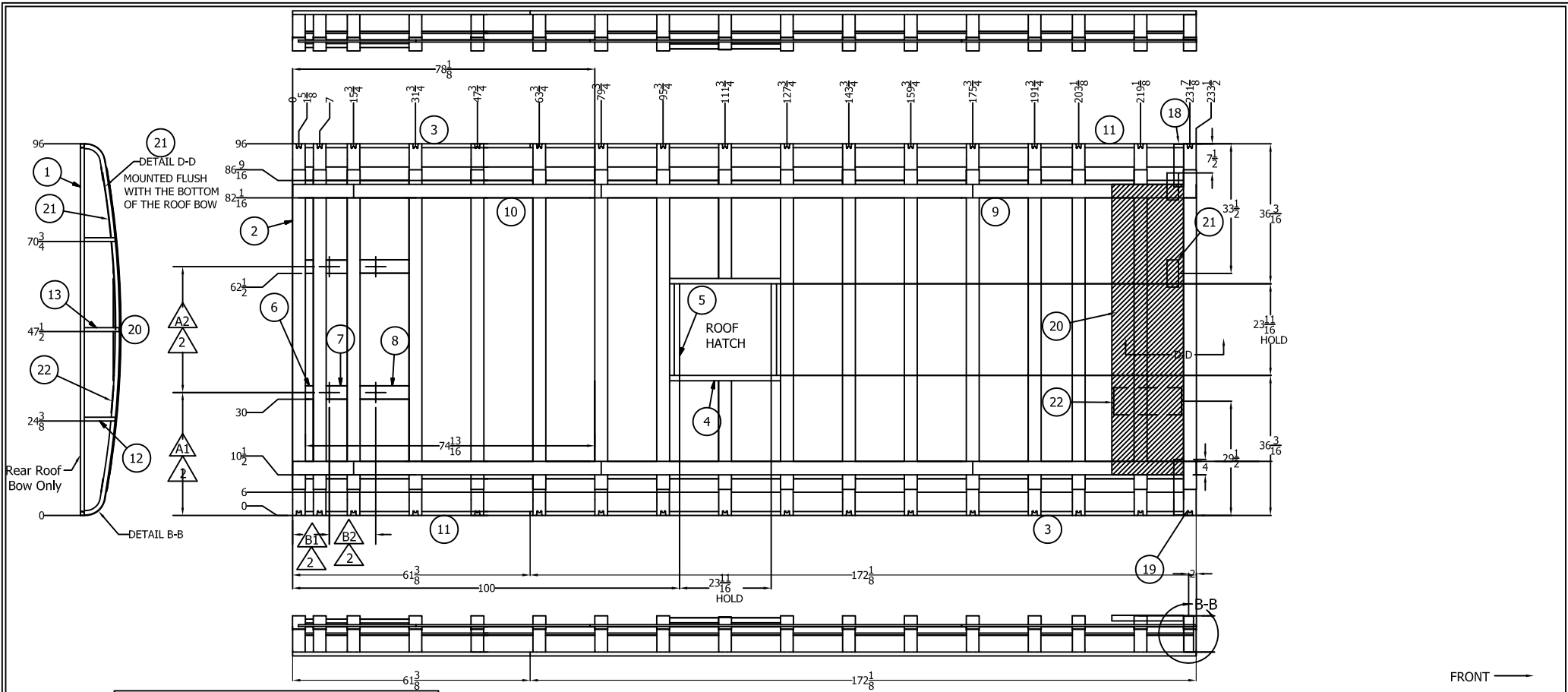
ISOMETRIC VIEW

DETAIL B
SCALE 1 / 2

All Senator II and President II 96" Wide bodies are constructed of identical materials and methods. Battery tray is not available on President II. The OEM Freightliner Tray is used.

REVISION HISTORY				
ZONE CAGES	REV	DESCRIPTION	DATE	APPROVED

		TAS		
DFTSN:		TITLE FORD F-550 SENATOR II HD - 201" - 226" BOX CAGE W/C REAR LIFT, STANDARD FLOOR		
DATE: 03/25/16		DWG NO 32-28-0008-16	SHEET 1 OF 1	



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 OTHERS LOCATIONS 16" ON CENTER.
- 5- SEALANT USAGE: 1/4" MINIMUM 3/8" MAXIMUM BEAD ON ALL ROOF FRAME TO LUAN SURFACES.

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

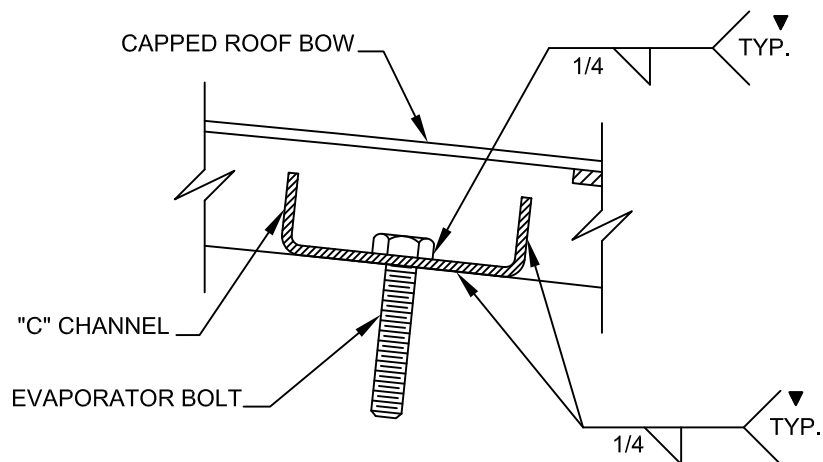
Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1x1x94	Steel Tube 16ga. 1"x 1"x 94"
2	16	80225-000001	Allstar Ford and Chevy Roof Bow 96"
3	2	1 x 1 x 172.125	Steel Tube 16ga.x 1"x 1"x 172-1/8"
4	2	70009047-30.5	Steel Channel 16ga. 1-3/8"x1-3/8"x 30-1/2"
5	2	70009047-23.6875	Steel Channel 16ga. 1-3/8"x1-3/8"x 23-11/16"
6	2	20005S-3.75	Steel Channel 16ga. 1"x 3-1/2"x 3-3/4"
7	2	20005S-9.125	Steel Channel 16ga. 1"x 3-1/2"x 9-1/8"
8	2	20005S-14.375	Steel Channel 16ga. 1"x 3-1/2"x 14-3/8"
9	4	3.5 x 93-1/8	Steel plate 16ga.x 3.5"x 93-1/8"
10	8	3.5 x 96	Steel plate 16ga.x 3.5"x 96"
11	2	1 x 1x 63-3/8	Steel Tube 16ga.x 1"x1"x 63-3/8"
12	2	1x1x8	Steel Tube 16ga. 1"x 1"x 8"
13	1	1x1x9	Steel Tube 16ga. 1"x 1"x 9"
14	4	3.5 x 17.75	Steel plate 16ga.x 3.5"x 17-3/4"
15	0	8 x 11.3125	Steel plate 14ga.x 8"x 11-5/16"
16	0	8 x 8.5625	Steel plate 14ga.x 8"x 8-9/16"
17	0	8 x 3.25	Steel plate 14ga.x 8"x 3-1/4"

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
18	1		Steel plate 16ga. x 3" x 14-1/4"
19	1		Steel plate 16ga. x 3" x 13-1/4"
20	1		Steel plate 16ga. x 14" x 84"
21	2		Steel plate 16ga. x 3" x 7"
22	1		Steel plate 16ga. x 7" x 13"

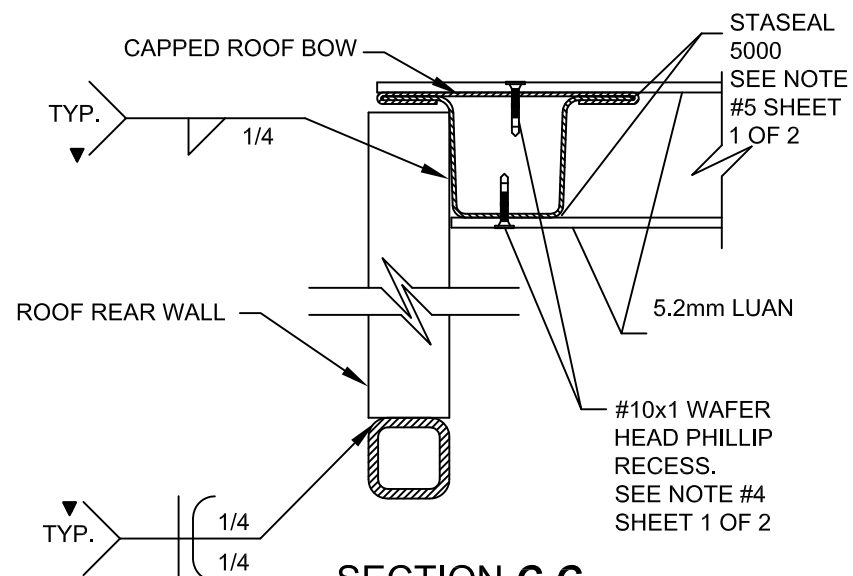
THIS DRAWING AND THE INFORMATION THEREON ARE THE EXCLUSIVE PROPERTY OF STARTRANS BUS, A DIVISION OF FOREST RIVER. IT SHALL NOT BE COPIED OR DUPLICATED IN ANY MANNER, NOR SHALL IT BE SUBMITTED TO OUTSIDE PARTIES FOR EXAMINATION WITHOUT OUR WRITTEN CONCENT. IT IS LOANED FOR USE WITH REFERENCE TO WORK UNDER CONTRACT WITH, OR PROPOSALS SUBMITTED TO STARTRANS BUS, A DIVISION OF FOREST RIVER.

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

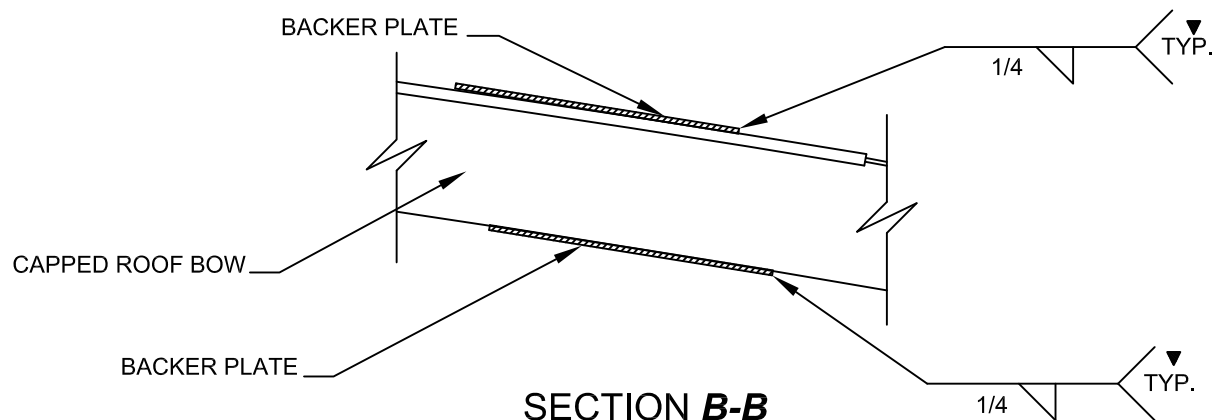
▼ CRITICAL CONTROL ITEM



SECTION A-A




SECTION C-C

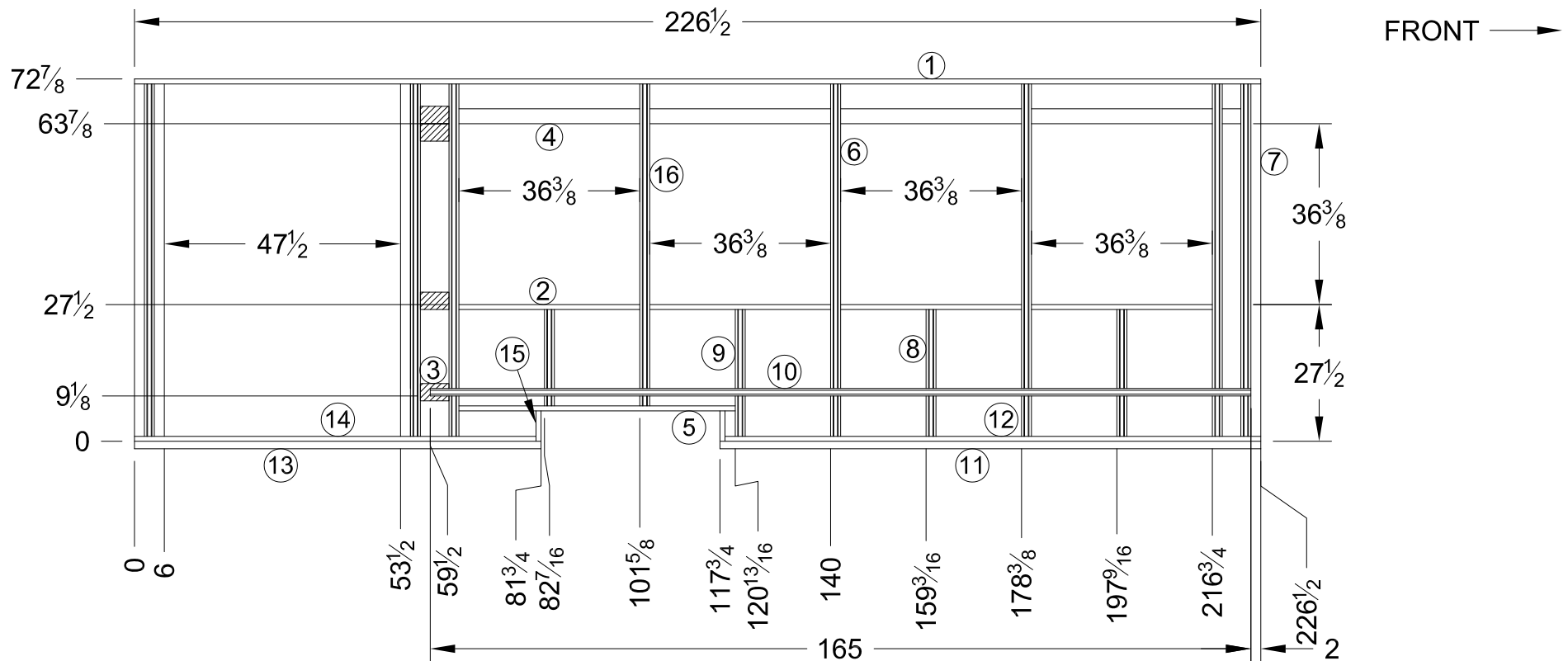


SECTION *B-B*

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	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


THIS DRAWING AND THE INFORMATION THEREON ARE THE EXCLUSIVE PROPERTY OF STARTRANS BUS, A DIVISION OF FOREST RIVER. IT SHALL NOT BE COPIED OR DUPLICATED IN ANY MANNER, NOR SHALL IT BE SUBMITTED TO OUTSIDE PARTIES FOR EXAMINATION WITHOUT OUR WRITTEN CONSENT. IT IS LOANED FOR USE WITH REFERENCE TO WORK UNDER CONTRACT WITH, OR PROPOSALS SUBMITTED TO STARTRANS BUS, A DIVISION OF FOREST RIVER.

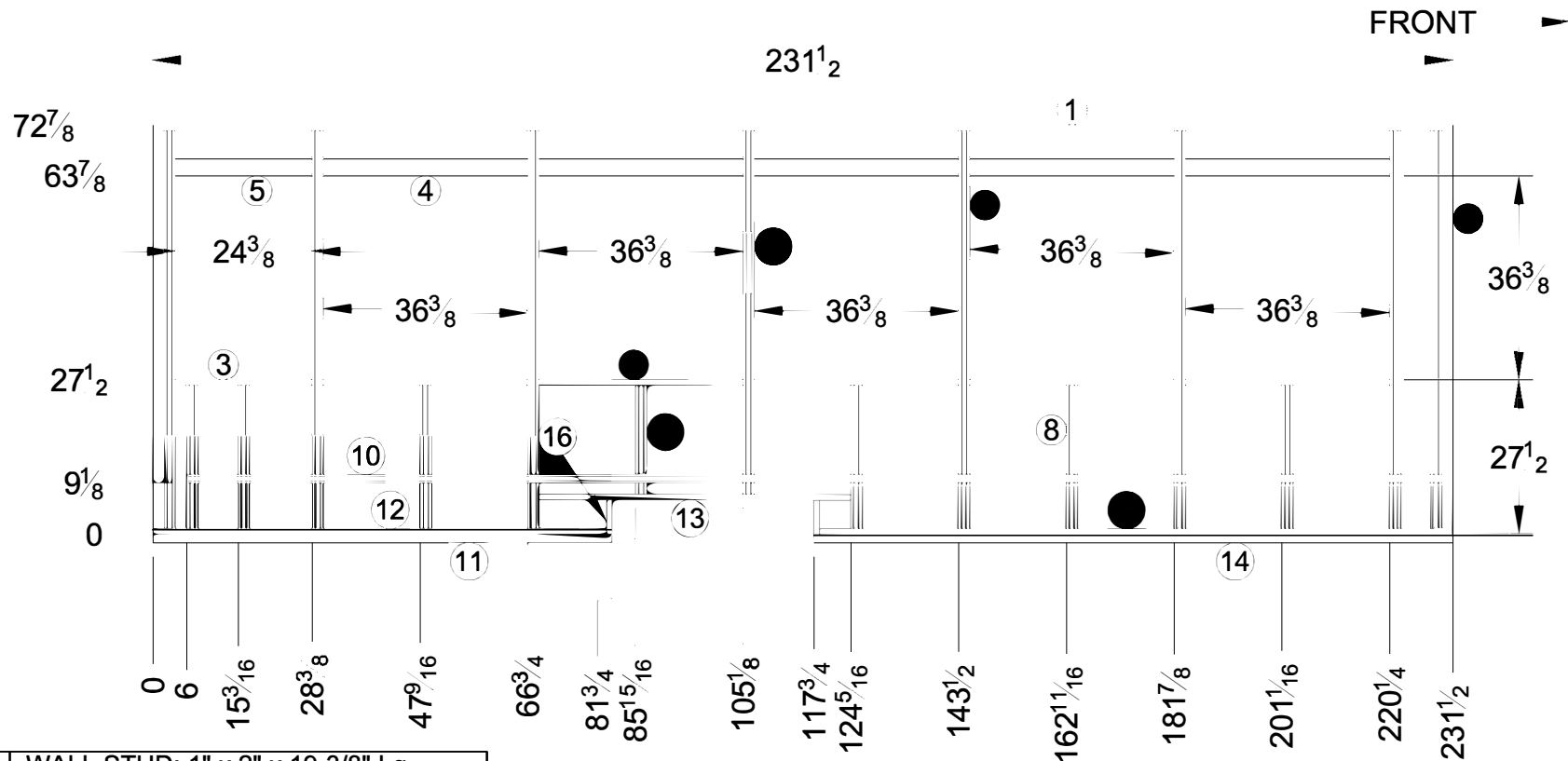
						TOLERANCE UNLESS OTHERWISE SPECIFIED	 a division of Forest River, Inc.		
A	PRELIM PACKET:	TAS		03/23/16		WOOD ± 1/8"	OTHER ± 1/16"	DATE: 03/23/16	TITLE: FORD F-550 SENATOR II HD FRAME, ROOF362" BODY
REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.	± 1°	± 1/2°	DWG. No. 32-28-0006-15	SHEET 2 OF 2



16	1	WALL STUD: 1" x 2" x 64-3/4" Lg.
15	1	TUBE: 16GA. 1" x 1" x 6-1/8" Lg.
14	1	TUBE: 16GA. 1" x 1" x 80-3/4" Lg.
13	1	ANGLE: 11GA. 1-1/2" x 2" x 81-3/4" Lg.
12	1	TUBE: 16GA. 1" x 1" x 107-3/4" Lg.
11	1	ANGLE: 11GA. 1-1/2" x 2" x 108-3/4" Lg.
10	1	SEAT TRACK: 165 Lg.
9	1	WALL STUD: 1" x 2" x 19-3/8" Lg.
8	3	WALL STUD: 1" x 2" x 25-1/2" Lg.
7	4	TUBE: 1" x 2" x 70-7/8" Lg.
6	7	WALL STUD: 1" x 2" x 70-7/8" Lg.
5	1	TUBE: 16GA. 1" x 1" x 55-9/16" Lg.
4	4	TUBE: 16GA. 1" x 3" x 36-3/8" Lg.
3	4	STRAP: 11GA. 3-1/2" x 5-3/4" Lg.
2	4	TUBE: 16GA. 1" x 1" x 36-3/8" Lg.
1	1	TUBE: 16GA. 1" x 1" x 226-1/2" Lg.


THIS DRAWING AND THE INFORMATION THEREON ARE THE EXCLUSIVE PROPERTY OF STARTRANS BUS, A DIVISION OF FOREST RIVER, INC. IT SHALL NOT BE COPIED OR DUPLICATED IN ANY MANNER, NOR SHALL IT BE SUBMITTED TO OUTSIDE PARTIES FOR EXAMINATION WITHOUT OUR WRITTEN CONSENT. IT IS LOANED FOR USE WITH REFERENCE TO WORK UNDER CONTRACT WITH, OR PROPOSALS SUBMITTED TO STARTRANS BUS, A DIVISION OF FOREST RIVER.

						TOLERANCE UNLESS OTHERWISE SPECIFIED		 a division of Forest River, Inc.	
						WOOD	OTHER	DATE: 03/23/16	TITLE: SENATOR II HD FORD F-550 DRIVERS SIDEWALL REAR
A	PRELIM PACKET:	TAS	03/23/16			± 1/8"	± 1/16"	NAME: TAS	LIFT 96" WIDE 213"WB/362"BDY
REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.	± 1°	± 1/2°	DWG. No.	32-28-0022-12 SHEET 1 OF 1

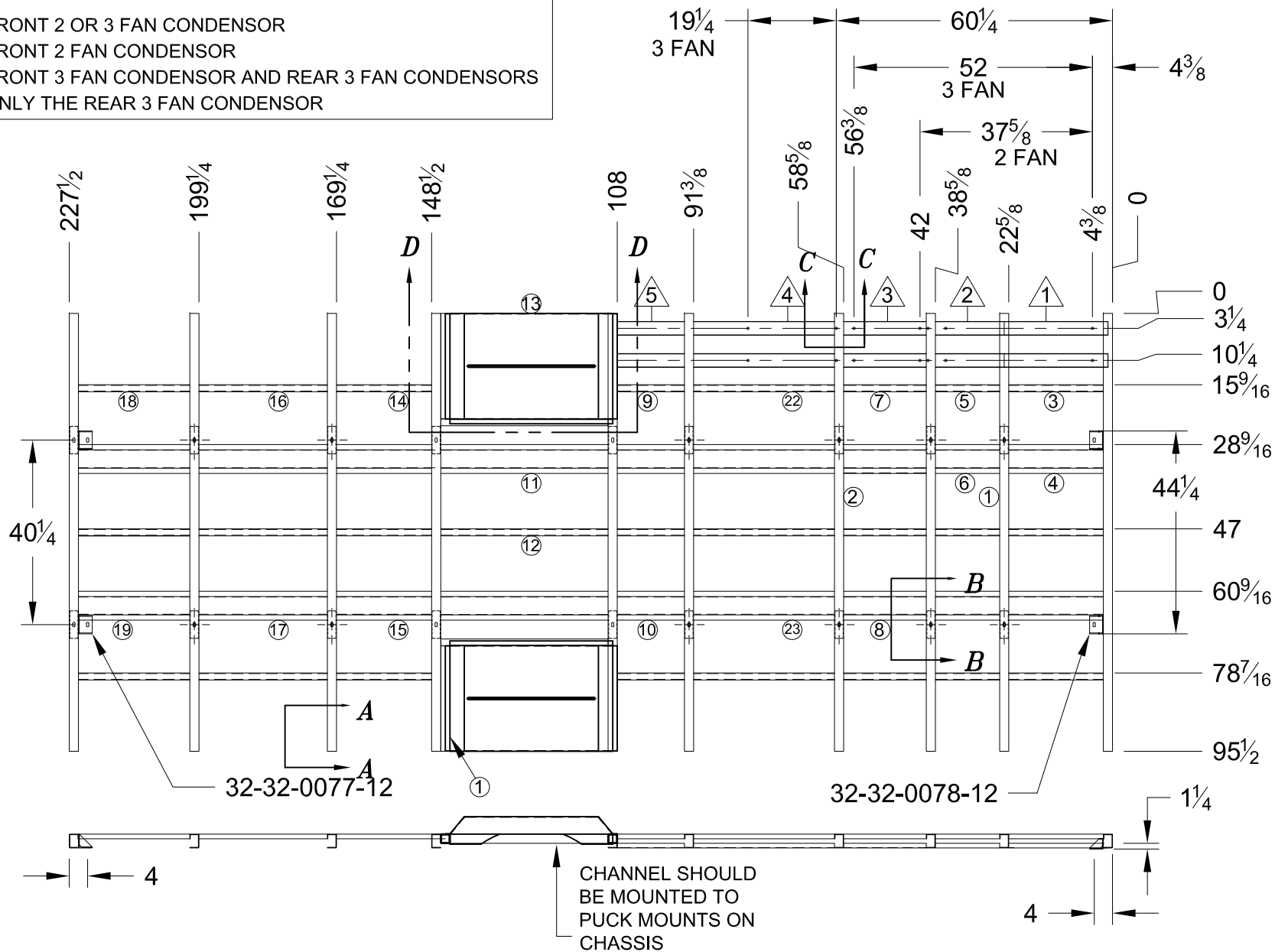


17	1	WALL STUD: 1" x 2" x 19-3/8" Lg.
16	1	TUBE: 16GA. 1" x 1" x 6-1/8" Lg.
15	1	TUBE: 16GA. 1" x 1" x 112-3/4" Lg.
14	1	ANGLE: 11GA. 1-1/2" x 2" x 113-3/4" Lg.
13	1	TUBE: 16GA. 1" x 1" x 55-9/16" Lg.
12	1	TUBE: 16GA. 1" x 1" x 80-3/4" Lg.
11	1	ANGLE: 11GA. 1-1/2" x 2" x 81-3/4" Lg.
10	1	SEAT TRACK: 223-1/2" Lg.
9	1	WALL STUD: 1" x 2" x 64-3/4" Lg.
8	6	WALL STUD: 1" x 2" x 25-1/2" Lg.
7	2	TUBE: 1" x 2" x 70-7/8" Lg.
6	7	WALL STUD: 1" x 2" x 70-7/8" Lg.
5	1	TUBE: 16GA. 1" x 3" x 24-3/8" Lg.
4	5	TUBE: 16GA. 1" x 3" x 36-3/8" Lg.
3	1	TUBE: 18GA. 1" x 1" x 24-3/8" Lg.
2	5	TUBE: 18GA. 1" x 1" x 36-3/8" Lg.
1	1	TUBE: 16GA. 1" x 1" x 231-1/2" Lg.


THIS DRAWING AND THE INFORMATION THEREON ARE THE EXCLUSIVE PROPERTY OF STARTRANS BUS, A DIVISION OF FOREST RIVER. IT SHALL NOT BE COPIED OR DUPLICATED IN ANY MANNER, NOR SHALL IT BE SUBMITTED TO OUTSIDE PARTIES FOR EXAMINATION WITHOUT OUR WRITTEN CONSENT. IT IS LOANED FOR USE WITH REFERENCE TO WORK UNDER CONTRACT WITH, OR PROPOSALS SUBMITTED TO STARTRANS BUS, A DIVISION OF FOREST RIVER.

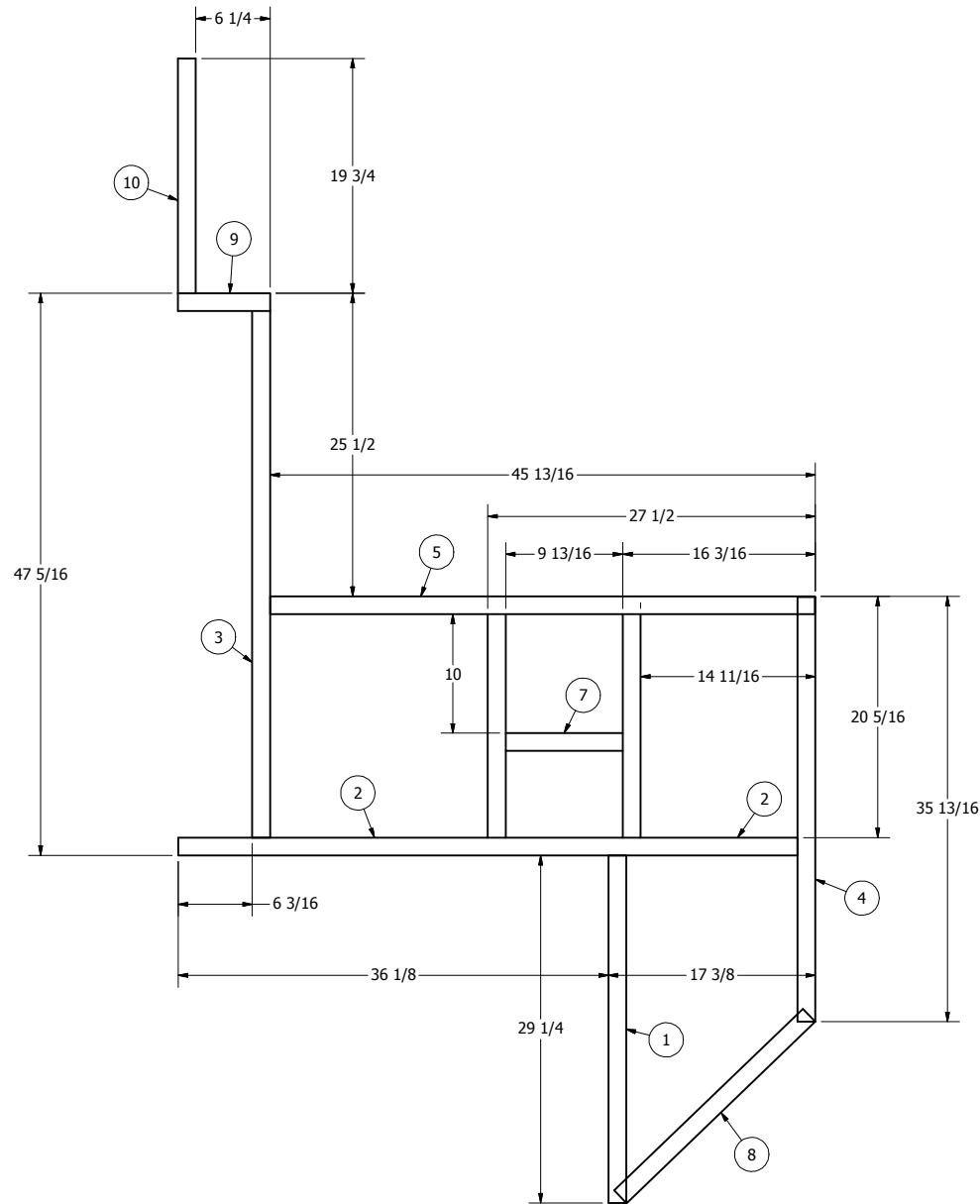
				TOLERANCE UNLESS OTHERWISE SPECIFIED				 a division of Forest River, Inc.	
				W O D		OTHER		DATE: 03/23/16	TITLE: SENATOR II HD FORD F-550 DRIVERS SIDEWALL REAR LIFT 96" WIDE 213"WB/362"BDY
A PRELIM PACKET:				TAS	03/23/16	± 1/8"		NAME: TAS	
REV. LET.				BY	CHK	DATE	ECN No.	DWG. No.	32-28-0022-12 SHEET 1 OF 1
DESCRIPTION OF CHANGE				± 1°		± 1/2°			

- 1 - STANDARD FOR FRONT 2 OR 3 FAN CONDENSOR
- 2 - STANDARD FOR FRONT 2 FAN CONDENSOR
- 3 - STANDARD FOR FRONT 3 FAN CONDENSOR AND REAR 3 FAN CONDENSORS
- 4 - STANDARD FOR ONLY THE REAR 3 FAN CONDENSOR

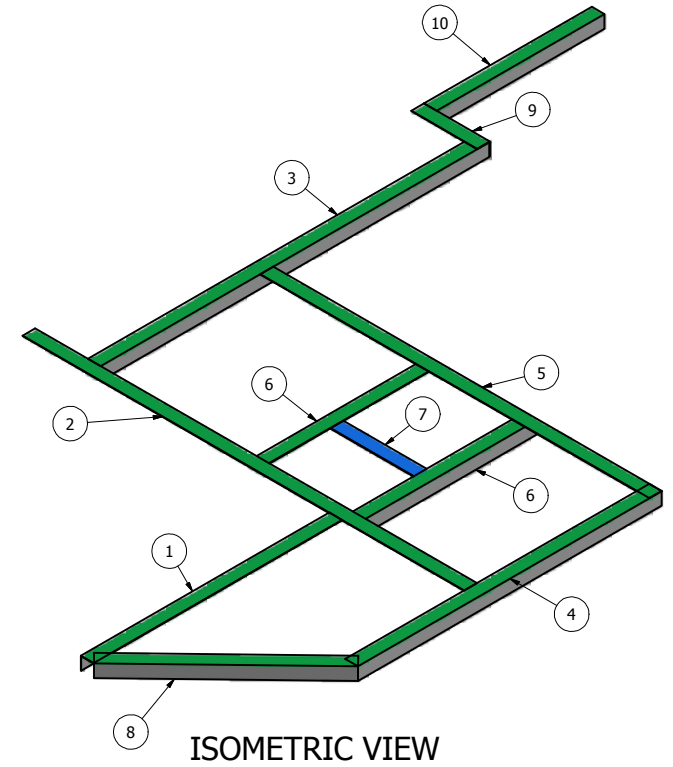


THIS DRAWING AND THE INFORMATION THEREON ARE THE EXCLUSIVE PROPERTY OF STARTRANS BUS, A DIVISION OF FOREST RIVER. IT SHALL NOT BE COPIED OR DUPLICATED IN ANY MANNER, NOR SHALL IT BE SUBMITTED TO OUTSIDE PARTIES FOR EXAMINATION WITHOUT OUR WRITTEN CONSENT. IT IS LOANED FOR USE WITH REFERENCE TO WORK UNDER CONTRACT WITH, OR PROPOSALS SUBMITTED TO STARTRANS BUS, A DIVISION OF FOREST RIVER.

								TOLERANCE UNLESS OTHERWISE SPECIFIED		<div> STARTRANS a division of Forest River, Inc.</div>			
								WOOD	OTHER	DATE: 03/23/16	TITLE: FLOOR FRAMING 213"WB/362"BDY FORD SENATOR II HD		
A	PRELIM PACKET:			TAS	03/23/16			+ 1/8"	+ 1/16"	NAME: TAS			
REV. LET.	DESCRIPTION OF CHANGE			BY	CHK	DATE	ECN No.	+ 1°	+ 1/2°	DWG. No.	32-28-0004-12	SHEET 1 OF 2	




TOP VIEW



Note:

- 1). Material to be 16ga. x 1-1/2"x 1-1/2"x Steel Angle 11ga.
- 2). Viewed from Exterior.

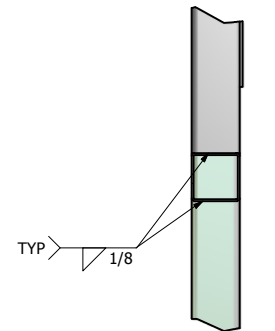
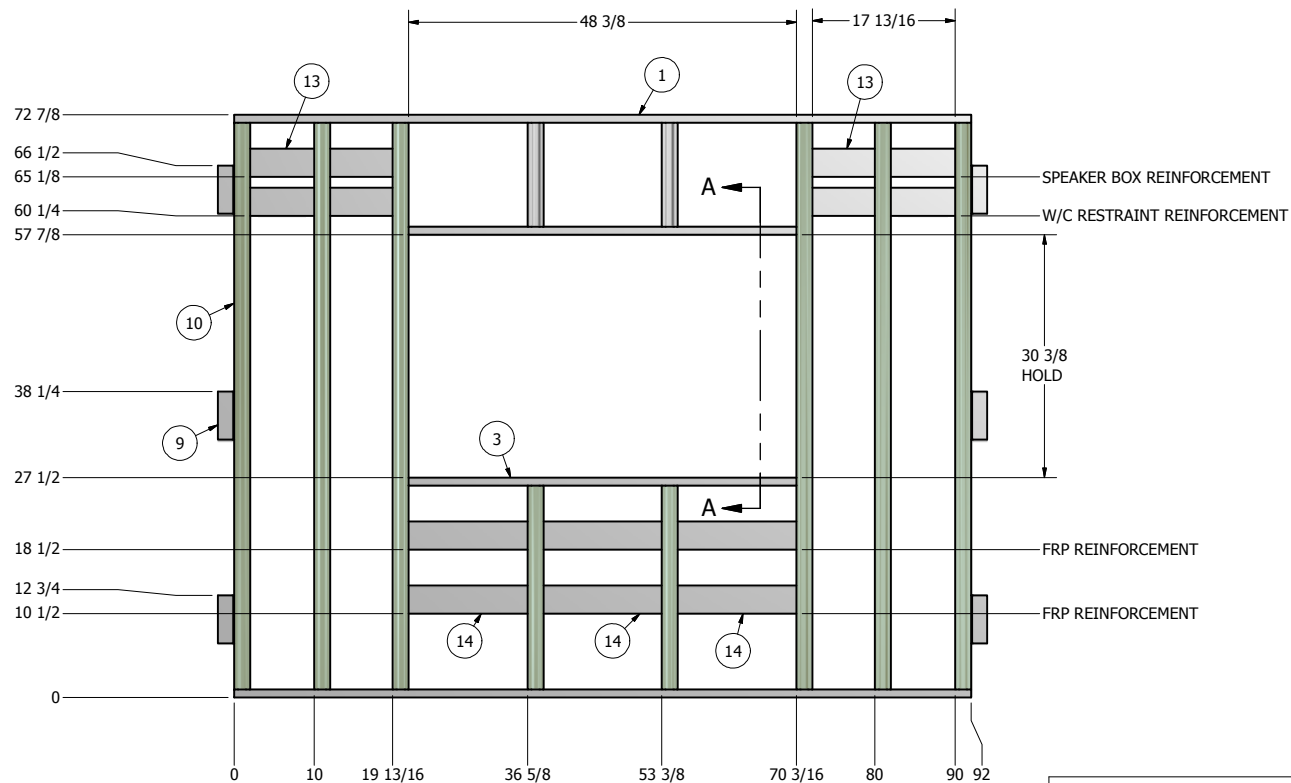
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	02071056-29.25	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 29-1/4" lg. A-513
2	1	02071056-52	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 52" lg. A-513
3	1	02071056-45.75	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 45-3/4" lg. A-513
4	1	02071056-35.75	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 35-3/4" lg. A-513
5	1	02071056-45.5	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 45-3/4" lg. A-513
6	2	02071056-20.25	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 20-1/4" lg. A-513
7	1	1.5 x 12.75	Steel plate 11ga.x 1.875"x 20-3/16"
8	1	02071056-22	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x22" lg. A-513
9	1	02071056-7.75	STEEL ANGLE 11ga.x 1-1/2"x 1-1/2"x 7-3/4" lg. A-513
10	1	02071056-19.75	Aluminized ANGLE 11ga.x 1-1/2"x 1-1/2"x 19-3/4" lg. A-513

			
DFTSN:	TAS	TITLE	FORD F-550 SENATOR II HD FALSE FLOOR
DATE:	03/23/16	DWG NO	32-30-0019-12
		SHEET	1 OF 1

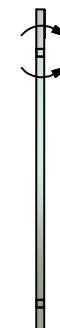
REVISION HISTORY			
ZONE	REV	DESCRIPTION	DATE
CAGES			

▼ CRITICAL CONTROL ITEM

USAGE: ALLSTAR XL W/REAR
EGRESS WINDOW



DETAIL B
SCALE 1 / 2




SECTION A-A
SCALE 1 / 12

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	1x1x92	Steel Tube 16ga. 1"x 1"x 92"
2	2	1x2x70.875	Steel Tube 16ga. 1"x 2"x 70-7/8"
3	2	1x1x48.375	Steel Tube 16ga. 1"x 1"x 48-3/8"
4	1	1x1x38.5	Steel Tube 16ga. 1"x 1"x 38-1/2"
5	1	1x1x11.625	Steel Tube 16ga. 1"x 1"x 11-5/8"
6	4	1x1x22.75	Steel Tube 16ga. 1"x 1"x 22-3/4"
7	1	1x1x36.375	Steel Tube 16ga. 1"x 1"x 36-3/8"
8	3	1x1x36.5	Steel Tube 16ga. 1"x 1"x 36-1/2"
9	6	ANGLE 1x2x6	Steel Angle 16ga.x 1x 2x 6"
10	9	02062351.70.875	WALL BOW: 18ga.x 1"x 2"x 70-7/8" Lg. A-513
11	4	02062351.25.5	WALL BOW: 18ga.x 1"x 2"x 25-1/2" Lg. A-513
12	2	02062351.13	WALL BOW: 18ga.x 1"x 2"x 13" Lg. A-513
13	4	3.5 x 17.8125 STEEL PLATE	STEEL PLATE 11ga.x 3-1/2 x 17-13/16"
14	6	3.5 x 14.8125 STEEL PLATE	STEEL PLATE 11ga.x 3-1/2 x 14-13/16"

NOTES:
1-DRAWING VIEWED FROM EXTERIOR SIDE OF UNIT.

REVISION HISTORY				
ZONE	REV	DESCRIPTION	DATE	APPROVED
CAGES				

			
DFTSN:	TAS	TITLE	FRAME, REAR WALL/WITH 30"x48" WINDOW 96" FORD F-550 SENATOR II HD
DATE:	03/25/16	DWG NO	32-28-0009-11
		SHEET	1 OF 1

Founded in 1972

The fastest-growing vehicle lighting manufacturer in the U.S., Optronics International attributes its success to delivering better value, better options and better lighting to its customers. Optronics International is a premier worldwide manufacturer of industrial and commercial vehicle safety lighting products. Optronics specializes in interior and exterior LED and incandescent lighting for the HD, trailer, RV, marine, and transit vehicle markets.

ISO Certified

Optronics is headquartered in Tulsa, Oklahoma, with an ISO/TS 16949:2009 certified manufacturing facility in Annan District, Tainan, Taiwan, and additional manufacturing capabilities in its ISO 9001:2008 certified facility in Muskogee, Oklahoma. The company has an ISO 9001:2008 certified distribution facility in Goshen, Indiana, as well as distribution through its location in Ontario, Canada.

Lifetime LED Warranty

ALL Optronics LED lighting is now covered by a one-diode lifetime warranty that replaces the lamp if even one diode fails.



Muskogee, OK



Goshen, IN



Tainan City, Taiwan





MCL66AB

MCL66 SERIES

Sealed LED Surface Mount Marker/Clearance Lights

- Select from 6-LED and 2-LED models in amber and red
- Sonically sealed, waterproof
- Surface mount, mounts on 3" centers
- Includes both lead and ground wire
- MCL166 series lights include a gasket and wire outlet grommet

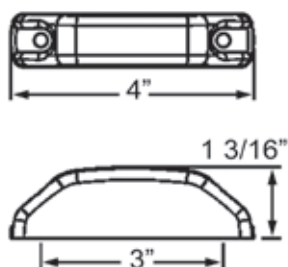
BULK P/N	POLYPACK P/N	DESCRIPTION	QTY
YELLOW			
MCL66AB	MCL66ABP	6-LED, 12V	20



MCL66RB

RED			
MCL66RB	MCL66RBP	6-LED, 12V	20

ACCESSORIES			
A66GB	A66GBP	Gasket, black	100



FMVSS	P2
MATERIALS	Polycarbonate lens and housing
VOLT/AMP	12.8VDC - 0.057A
WT/DIMS	.088 lbs. / 4" x .875" x 1.188"
WARRANTY	Lifetime LED Warranty

STL43 SERIES**4" Round Sealed LED Lights**

- Sonically sealed, waterproof
- Kits include grommet and plug
- Mount in any 360 degree position
- Available in 12V and 24V models
- Available with standard PL-3 or optional weathertight connection



STL43RB

BULK P/N	POLYPACK P/N	DESCRIPTION	QTY
----------	--------------	-------------	-----

RED STOP/TURN/TAIL LIGHT - 10 DIODES

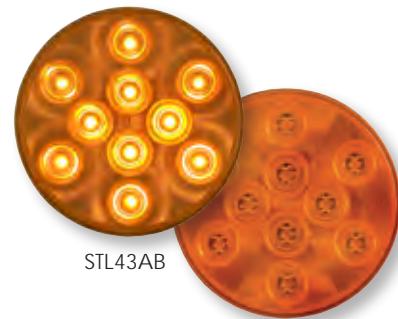
STL43RB	STL43RBP	PL-3 connection, 12V	10
---------	----------	----------------------	----

YELLOW PARKING/TURN SIGNAL - 10 DIODES

STL43AB	STL43ABP	PL-3 connection, 12V	10
---------	----------	----------------------	----

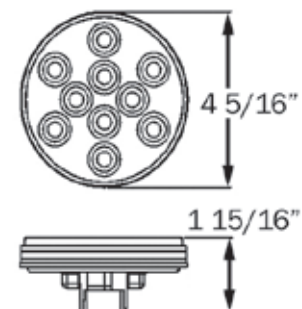
ACCESSORIES

A45GB	A45GBP	Grommet	50
-------	--------	---------	----



STL43AB

FMVSS	Red S T I P2; Yellow I6 P
MATERIALS	Polycarbonate lens and housing
VOLT/AMP	Red: 12.8VDC - .360A Stop/Turn, .030A Tail Yellow: 12.8VDC - .310A Turn, .046A Parking
WT/DIMS	.265 lbs. / 4.313" x 4.313" x 1.938"
WARRANTY	Lifetime LED Warranty



HOLE CUT-OUT: 4.5"

BUL11 SERIES**4" Round Sealed Clear
DOT LED Back-Up Lights**

- Sonically sealed, waterproof
- Certified for back-up light function when installed as pair in two-lamp system [SAE (2)R]
- Available in grommet and flange mount models
- Grommet mount version available with standard 2-pin, or optional weathertight connection
- Grommet mount version available in 12V and 24V

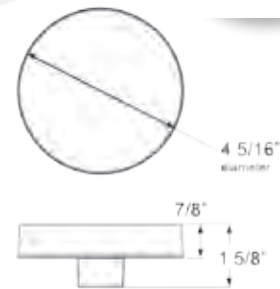


BUL11CB

BULK P/N	POLYPACK P/N	DESCRIPTION	QTY
----------	--------------	-------------	-----

CLEAR BACK-UP LIGHTS - 10 DIODES

BUL11CB	BUL11CBP	12V, two-pin connection	10
---------	----------	-------------------------	----

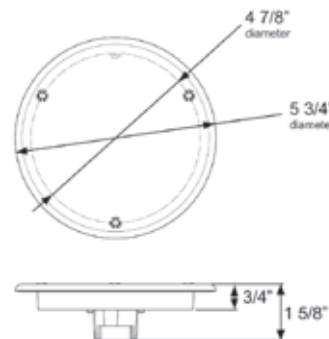


HOLE CUT-OUT: 4.5"

ACCESSORIES

A45GB	A45GBP	Grommet	50
-------	--------	---------	----

FMVSS	(2) R
MATERIALS	Polycarbonate lens and housing
VOLT/AMP	12.8VDC - 0.26A
WT/DIMS	BUL11CB/CKB: .309 lbs. / 4.313" x 4.313" x 1.625"
	BUL11CMB/CM24B: .309 lbs. / 4.313" x 4.313" x 1.625"
	BUL11CBX: .353 lbs. / 5.75" x 5.75" x 1.625"
WARRANTY	Lifetime LED Warranty



HOLE CUT-OUT: 4.5"

STL90 SERIES**7" Round LED Transit Lights**

- Sonically sealed, waterproof
- Surface mount light with mounting gasket
- Hard wired with separate ground wire
- Available in 12V and 12-24V models



BULK P/N	POLYPACK P/N	DESCRIPTION	QTY
----------	--------------	-------------	-----

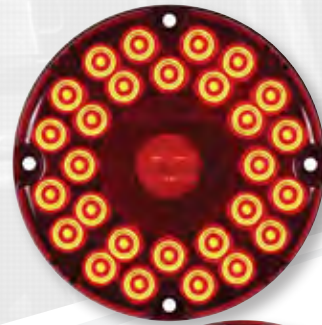
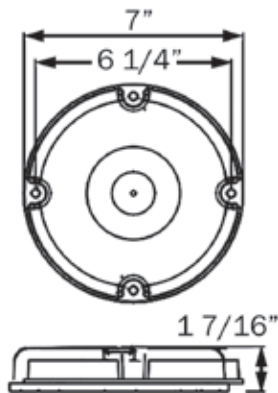
RED STOP/TURN/TAIL LIGHT - 31 DIODES

STL90RB	STL90RBP	Stop/turn/tail light, 12V	5
---------	----------	---------------------------	---

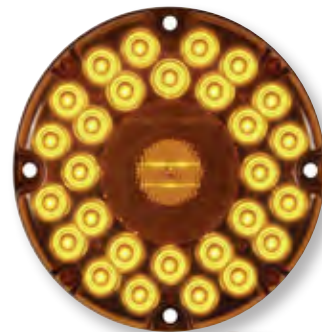
YELLOW TURN SIGNAL - 31 DIODES

STL90AB	STL90ABP	Parking/turn signal, 12V	5
---------	----------	--------------------------	---

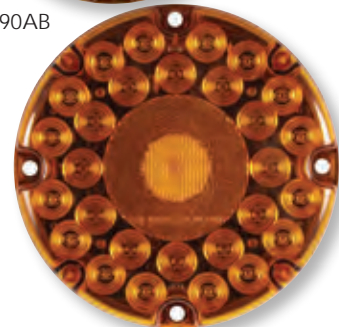
FMVSS	Red S2 I6 T2 P2 A; Yellow I6 P2 A
MATERIALS	Polycarbonate lens and housing
VOLT/AMP	Red: 12.8VDC - .243A Stop/Turn, .046A Tail Yellow: 12.8VDC - .275A Turn, .042A Parking
WT/DIMS	.970 lb. / 7" x 7" x 1.438"
WARRANTY	Lifetime LED Warranty



STL90RB



STL90AB



LPL12 SERIES**3/4" Sealed LED License Light**

- Sealed, waterproof
- Meets SAE J587 when properly mounted using brackets listed below
- Design includes both lead and ground wire



LPL12CB

BULK P/N	POLYPACK P/N	DESCRIPTION	QTY
LICENSE LIGHT - 2 DIODES			
LPL12CB	LPL12CBP	Light with .180 female barrels	20

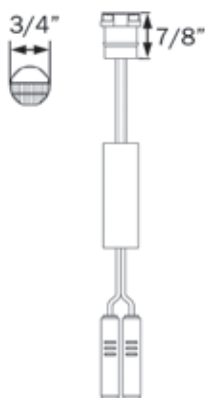
Bracket with gasket, A11GLPB grommet

ACCESSORIES

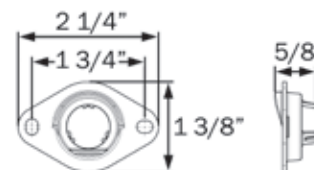
A11BLPB	A11BLPBP	Black flush mount bracket	50
---------	----------	---------------------------	----



FMVSS	L
MATERIALS	Polycarbonate lens and housing
VOLT/AMP	12.8VDC - 0.11A
WT/DIMS	.022 lb. / 0.74" x 0.74" x .938"
WARRANTY	Lifetime LED Warranty



LPL12CB



A11GLPB

MCL48 SERIES**LED Intermediate Side Marker Light
with Supplemental Mid-Ship Turn**

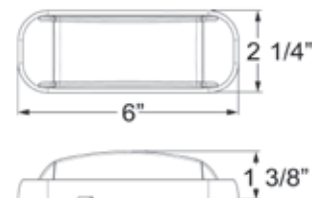
- Sonically sealed, waterproof
- Surface mount, mounts on 4-13/16" centers
- Includes both lead and ground wires

BULK P/N	POLYPACK P/N	DESCRIPTION	QTY
YELLOW - 16 DIODES			
MCL48AB	MCL48ABP	Light	20
ACCESSORIES			
A48CB	A48CBP	Chrome bezel	50

FMVSS	P2
MATERIALS	Polycarbonate lens and housing
VOLT/AMP	12.8VDC - Side marker .074A; Turn signal .248A
WT/DIMS	.221 lbs. / 6" x 2.25" x 1.375"
WARRANTY	Lifetime LED Warranty



MCL48AB





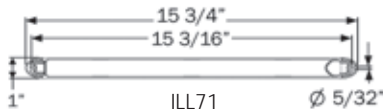
ILL70/71/72 SERIES

Opti-Brite™ LED Interior Strip Lights for Surface Mount



ILL71CB

- Low profile, slimline lights – only 1" wide by 5/8" thick
- Hard wired design includes both lead and ground wires
- Select from 9-inch, 16-inch and 22-inch strip lights and 11" and 18" awning lights
- Sealed, waterproof



16" WHITE LED STRIP LIGHT - 18 DIODES

ILL71CB	ILL71CBP	Strip light	20/10
---------	----------	-------------	-------

MATERIALS

Polycarbonate lens and housing

VOLT/AMP

ILL70: 12.8VDC - .150A

ILL71: 12.8VDC - .300A

ILL72: 12.8VDC - .480A

WT/DIMS

ILL70: .154 lb. / 9.625" x 1" x .625"

ILL71: .187 lb. / 15.75" x 1" x .625"

ILL72: .210 lb. / 21.875" x 1" x .625"

WARRANTY

Lifetime LED Warranty

Raw lumen output: 370 lm

Effective lumen output: 342 lm

ILL31/32/35 SERIES

LED Low Profile Dome Lights

- Low profile dome lights for semi-recess or surface mount
- Durable steel housing and replaceable polycarbonate lens
- Hard wired design includes power and ground wires
- Select from standard diode or SMD LED models



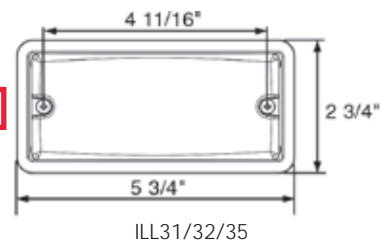
SURFACE MOUNT DOME LIGHT - 10 DIODES

ILL32CB	ILL32CBP	SMD LED	10
ILL32CPG	-	SMD LED, .180 male bullets	10

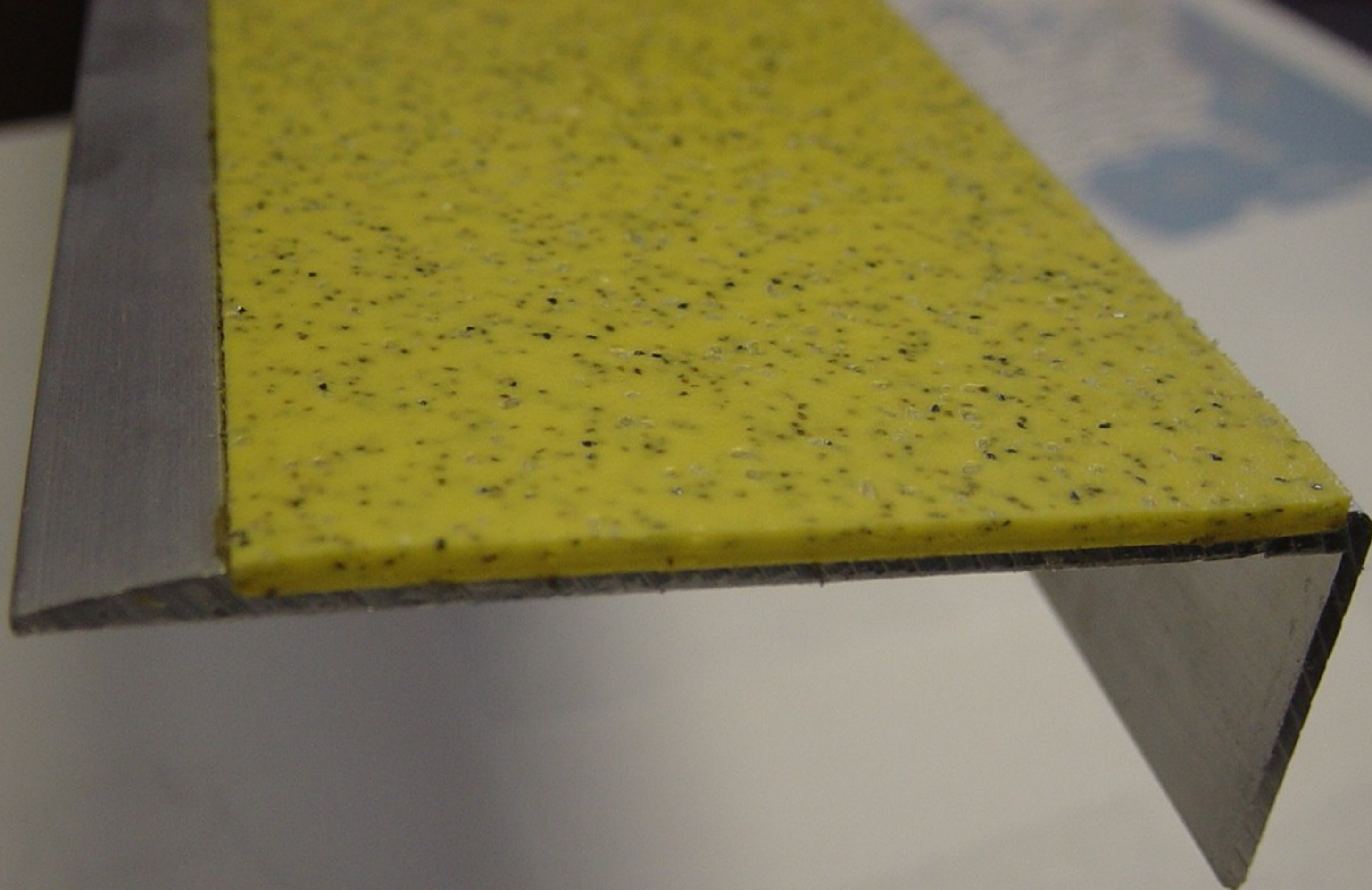
Raw lumen output: 70 lm

Effective lumen output: 53 lm

MATERIALS	Polycarbonate lens, plated steel housing
VOLT/AMP	12.8VDC - .024A
WT/DIMS	ILL31/35: .243 lb. / 5.75" x 2.75" x .938"
	ILL32: .243 lb. / 5.75" x 2.75" x .75"
WARRANTY	Lifetime LED Warranty



ILL32 - surface mount





Standard 3-Year Unlimited Mile Warranty Statement

2900 County Rd 6 West Elkhart, IN 46514 Phone: 800 338 8544

6630 E Hwy 114 Haslet, TX 76052 Phone: 800 473 9914

715 Willow Springs Lane York, PA 17406 Phone: 877 228 4247

ProAir warrants each new ProAir system to be free from defects in workmanship and materials under normal use and service within the expressed time limits set forth herein its various components from the date of installation.

This limited warranty shall exclude and does not extend the following exceptions:

- A. Components or system that have been subject to misuse, abuse, neglect, accident and road hazard
- B. Components or systems that have been altered and modified from factory specifications.
- C. Damages resulting from components being replace with aftermarket parts not authorized by Bus Air.
- D. Damages resulting from failure to perform scheduled and regular maintenance.
- E. Components and or systems that fail due to improper installation, inadequate air or coolant flow.
- F. Components such as filters, belts, pulleys, tensioners, hoses, and other daily wear and tear parts.
- G. Incidental, consequential damages or commercial losses from any cause.
- H. Loss of refrigerant unless there is a direct cause or a defect covered by this warranty.

See Warranty Procedure for proper process to claim warranty.

The liability of the company under this Limited Warrantee is limited to repair or replacement of the end user without charge for the component(s) acknowledged by the company to be defective. Repair or replacement shall be at locations approved by ProAir. The liability of Pro Air under this limited warranty does not extend to travel time, mileage, towing charges, vehicle rental, lodging or chassis down-time while the equipment is not operational.

This warranty applies to components in the continental North America, Hawaii, Alaska and Puerto Rico.

Components outside the Continental North America, Hawaii, Alaska and Puerto Rico are limited to only to replacement parts during the Warranty period. **Unless otherwise authorized, labor will NOT be covered during the warranty period for components outside the Continental North America, Hawaii, Alaska and Puerto Rico.**

THE WARRANTY SET FORTH ABOVE IS EXCLUSIVE, AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. PROAIR SPECIFICALLY DISCLAIMS THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PURPOSE.

Unmatched Allison Reliability

Where You Need It The Most



Pupil Transport Series™





Industry-Leading Reliability

Student safety starts with durable and reliable transportation. When we introduced automatic transmissions, we immediately revolutionized school bus transportation by adding unmatched reliability to driver and student comfort. Allison fully automatic transmissions are built to last and require minimal service—meaning not only lower maintenance costs, but also more time on the road. School buses experience reduced downtime, allowing them to safely transport children to and from school.

Allison transmissions are designed to deliver unrivaled reliability and durability while helping to protect vehicle drivelines. By engineering and manufacturing reliable, fully automatic transmissions and propulsion systems, our customers experience reduced downtime. That is why Allison transmissions are the preferred choice for school and shuttle buses.

Today, nearly all large school buses in the U.S. are equipped with Allison transmissions. And thanks to superior reliability, durability and improved safety, a growing number of school systems around the world rely on Allison.





All Allison Pupil Transport
Series™ transmissions come
with industry leading
transmission coverage.¹

¹ Please consult your Allison Sales
Representative or an Allison Authorized
Distributor/Dealer for more information.
Details are subject to change.



Fully Automatic Advantage

Our patented Continuous Power Technology™ delivers smoother, seamless, full-power shifts and superior acceleration and startability. Each shift is made automatically when appropriate, allowing drivers to precisely manage performance and exercise superior vehicle control.

More Control

Allison offers several model choices, giving you ultimate control over selecting the features and power you need. Purchasing the right automatic transmission to transport your students is an important decision. With an Allison, not only are you choosing the industry leader, but you are choosing the transmission that has been proven for decades to work in the school bus industry.

Driver Benefits

Once behind the wheel of an Allison fully automatic-equipped vehicle, drivers are more alert and in tune with the vehicle, leading to increased driver retention and better safety records. Even experienced drivers benefit from more precise, safer handling and improved comfort.

Web-based and on-site training is available. To discuss further training, please contact your Allison Distributor.

Integral Retarder¹

The integral retarder available on an Allison transmission sets it apart from automated manual transmissions (AMTs). It helps the vehicle to slow down with less wear on the braking system. This results in greater control, maneuverability and optimized driving performance that will get you to your destination safely while minimizing brake usage.

Fail-Safe

Each Allison transmission is equipped with fail-safe controls. In the rare event of a failure, the transmission is designed to stay in gear, which allows it to continue operation, allowing the driver to move the vehicle to safety. With manual and AMTs, a vehicle could be stuck in place until help can arrive.

Prognostics

Allison prognostics monitor various operating parameters to determine and alert when service is due. This eliminates unnecessary fluid and filter changes and provides maximum transmission protection.

The Power Of The Torque Converter

Allison's torque converter smoothly multiplies engine torque, delivering more power to the wheels. By multiplying the engine power, drivers get increased performance, faster acceleration and greater operational flexibility. An Allison fully automatic transmission increases power while an automated manual transmission (AMT) loses power with every shift. An Allison Automatic eliminates power interrupts so you can accomplish more, even with a smaller engine.

Automatic Versus Automated Manual

While the manual clutch pedal is gone in an automated manual transmission (AMT), a mechanical clutch still facilitates the vehicle's launch. This mechanical clutch will wear and eventually burn out and need traditional maintenance and replacement, which means a vehicle spends more time being repaired and less time on the road.

Automated manual transmissions do not benefit from engine torque multiplication because engine torque must be controlled or limited to extend the life of the starting clutch, which limits vehicle performance.

Allison Automatics are unique because our patented torque converter experiences very little wear and our transmissions require only periodic fluid and filter changes to maintain peak performance. When maintenance is required, the Allison is easy to service, which gets your vehicle back on the road as soon as possible.





FUELSENSE® 2.0

with DynActive™ Shifting

Features

FuelSense® 2.0 presents new and upgraded FuelSense® features to provide even more precise balancing of fuel economy and performance:

DynActive™ Shifting—This new innovative shift scheduling uses an algorithm to choose the most efficient shift point, based on your specifications, vehicle and environmental parameters. Older shifting technologies use shift schedules with fixed shift points.

Neutral at Stop—This feature trims fuel consumption and emissions by reducing or eliminating the load on the engine when the vehicle is stopped. There are two versions of Neutral at Stop:

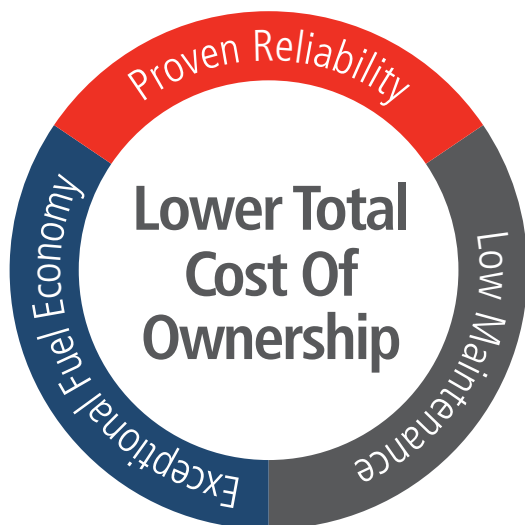
- Standard – Provides partial (first-level) neutral at stop.
- Premium – Provides full neutral at stop and a new, low-speed coasting capability.

Both versions lock the output while stopped to prevent rollback.

Acceleration Rate Management—A feature that mitigates aggressive driving by automatically controlling engine torque. Newly updated, in addition to five levels of control, it provides more precision by limiting vehicle acceleration to a customized calibrated rate.







The Best Route To Lower Cost Of Ownership

A fully automatic transmission from Allison, a trusted brand around the world, is the best way to keep your fleet on the road while reducing total cost of ownership. With extended periods between maintenance and a proven track record of reliability, Allison puts you in control of your fleet and of your budget.

Additionally, you can experience an increase in fuel economy thanks to FuelSense®. Finally, Allison Automatics with Continuous Power Technology™ not only reduce vehicle wear and tear, but provide a safer, smoother and more comfortable rider and driver experience. From the route to the bottom line, Allison puts you in control.



Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Mid-Size Medium Duty Vehicles	0.00000	EA	6498862.000000	0.00

Comm Code	Manufacturer	Specification	Model #
25101502			

Commodity Line Comments: Delivery 150 days after receipt of chassis.

Extended Description:

Mid-Size Medium Duty Vehicles
Grand Total of Class A - G vehicles as per attached Exhibit A Pricing Page