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Header 61

List View

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Procurement Folder: 1395147


Procurement Type: Central Master Agreement

Vendor ID: 000000109546 


Legal Name: WESTERN RESERVE COACH SALES INC

Alias/DBA:

Total Bid: \$3,692,858.00

Response Date: 05/30/2024 

Response Time: 13:29

Responded By User ID: 00001 

First Name: Benjamin

Last Name: Ryan

Email: ben@buspro1.com

Phone: 3309350844

SO Doc Code: CRFQ

SO Dept: 0810

SO Doc ID: DMT2400000007

Published Date: 5/28/24

Close Date: 5/30/24

Close Time: 13:30

Status: Closed

Solicitation Description: Less than 30 Ft. Cutaway Bus

Total of Header Attachments: 61

Total of All Attachments: 61



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: 1395147
Solicitation Description: Less than 30 Ft. Cutaway Bus
Proc Type: Central Master Agreement

Solicitation Closes	Solicitation Response	Version
2024-05-30 13:30	SR 0810 ESR05012400000006610	1

VENDOR
000000109546
WESTERN RESERVE COACH SALES INC

Solicitation Number: CRFQ 0810 DMT2400000007
Total Bid: 3692858
Response Date: 2024-05-30
Response Time: 13:29:17
Comments: See attachments

FOR INFORMATION CONTACT THE BUYER

John W Estep
304-558-2566
john.w.estep@wv.gov

Vendor		
Signature X	FEIN#	DATE

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Less than 30 ft. Cutaway Buses.	26.00000	EA	142033.000000	3692858.00

Comm Code	Manufacturer	Specification	Model #
25101502			

Commodity Line Comments: See Exhibit A Pricing Sheet in attachments and all supporting documentation - unit price is TOTAL sum based on estimated quantities provided in Exhibit A pricing form - see attached

Extended Description:

To establish an open ended contract for Less than 30 ft. Cutaway Buses. The vehicles will be utilized to assist public transportation throughout the state. The will be used in urban, sub-urban, and rural areas that includes hilly terrains and varying weather climates. These climates require vehicles that possess stop-start duty cycles.
Federal Terms and Conditions Apply



+1 307.776.9402
804 N Pratt St.
Ottawa, Ohio 45875

5/28/2024

The Endera commercial shuttle bus is manufactured in Ottawa, Ohio. Our bus is Buy America compliant and has been Altoona Tested in the 7yr/200,000 mile category.

Endera is a vertically integrated transportation technology company specializing in commercial ICE and electric vehicles, charging stations and software solutions.

American made, we design and manufacture ICE and electric vehicles and provide services that leverage leading technologies. With one of the lowest total costs of ownership over other commercial electric vehicle offerings, Endera is first to market with a sustainable solution that rivals its fossil fuel counterparts in price, technology, longevity, profitability and service.



Don White
Bid Coordinator/Sales Manager

BID FORM #2

CERTIFICATION FOR AIR & WATER POLLUTION

The Vendor certifies that the vehicles proposed:

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

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

Date

Authorized Signature

Title

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #3

**DISADVANTAGED BUSINESS ENTERPRISE
VENDORS/ MANUFACTURERS CERTIFICATION**

(Check appropriate statement)

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

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

5/28/2024

Date

Don White

Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #4

**BUY AMERICA CERTIFICATION
ROLLING STOCK**

Certificate of Compliance

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

5/28/2024

Date



Authorized Signature

Endera (Manufacturer)

Company Name

Don White

Name

Bid Coordinator

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
<30' Length Cutaway Bus


BID FORM #5

**FEDERAL MOTOR VEHICLE
SAFETY STANDARDS CERTIFICATION**

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

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

Endera (Manufacturer) hereby certifies that it

 IS or

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #7

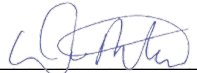
**CERTIFICATION OF PRIMARY PARTICIPANT REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third-party contract),
Endera (Manufacturer) _____ (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),
Endera (Manufacturer) _____, 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.



Signature and Title of Authorized Official

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #8

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

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

SPECIFICATION COMPLIANCE

NOTE: Please check if what is offered is in exact compliance with specifications. **Any discrepancies required 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.**

 X 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
<30' Length Cutaway Bus

BID FORM #9

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title



+1-419-523-3593
804 N Pratt St.
Ottawa, Ohio 45875

TO: Whom It May Concern

RE: FMVSS & ADA Requirements Endera Automotive, LLC

This is to certify that bus models manufactured by Endera Automotive, LLC will be in full compliance with all current applicable FMVSS requirements. Some items are certified based on the incomplete vehicle document supplied by Ford.

Including:

- | | |
|------------------|--|
| A. FMVSS No. 101 | Controls and Displays |
| B. FMVSS No. 102 | Transmission Shift Lever Sequence, Starter Interlock, and
Transmission Braking Effect |
| C. FMVSS No. 103 | Windshield Defrosting and Defogging Systems |
| D. FMVSS No. 104 | Windshield Wiping and Washing Systems |
| E. FMVSS No. 105 | Hydraulic and Electric Brake Systems |
| F. FMVSS No. 106 | Brake Hoses |
| G. FMVSS No. 108 | Lamps, Reflective Devices, and Associated Equipment |
| H. FMVSS No. 111 | Rearview Mirrors |
| I. FMVSS No. 113 | Hood Latch System |
| J. FMVSS No. 116 | Motor Vehicle Brake Fluids |
| K. FMVSS No. 119 | New Pneumatic Tires |
| L. FMVSS No. 120 | Tire Selection and Rims for Motor Vehicles Other Than
Passenger Cars |
| M. FMVSS No. 124 | Accelerator Control Systems |
| N. FMVSS No. 125 | Warning Devices |
| O. FMVSS No. 205 | Glazing Materials |
| P. FMVSS No. 207 | Seating Systems |
| Q. FMVSS No. 208 | Occupant Crash Protection |
| R. FMVSS No. 209 | Seat Belt Assemblies |
| S. FMVSS No. 210 | Seat Belt Assembly Anchorages |
| T. FMVSS No. 217 | Bus Emergency Exits and Window Retention and Release |
| U. FMVSS No. 220 | Rollover Protection Test |
| V. FMVSS No. 302 | Flammability of Interior Materials |
| W. FMVSS No. 404 | Platform Lift Installations on Motor Vehicles |

Regards,

A handwritten signature in black ink, appearing to read 'Scott Sanford'.

Scott Sanford

Endera Automotive, LLC

LABEL #4

MFD. BY: ENDERA MOTORS
 OTTAWA, OH
 DATE OF MFR. MO: 03 YR: 2022
 GVWR: 6,577 KG 14,500 LB)
 GAWR-FRONT:
 2,268 KG 5,000 LB)
 WITH LT225/75R16E TIRES,
 16X6.0K RIMS, @ 520 KPA
 (75 PSI) COLD SINGLE
 GAWR-INTERMEDIATE (1):
 KG LB)
 WITH TIRES,
 RIMS, @ KPA
 (PSI) COLD ☐ SINGLE ☐ DUAL
 GAWR-INTERMEDIATE (2):
 KG LB)
 WITH TIRES,
 RIMS, @ KPA
 (PSI) COLD ☐ SINGLE ☐ DUAL
 GAWR-REAR:
 4,355 KG 9,600 LB)
 WITH LT225/75R16.0K TIRES,
 16X6.0K RIMS, @ 550 KPA
 (80 PSI) COLD ☐ SINGLE ☒ DUAL

THIS VEHICLE HAS BEEN COMPLETED
 IN ACCORDANCE WITH THE PRIOR
 MANUFACTURERS' IVD, WHERE APPLIC-
 ABLE THIS VEHICLE CONFORMS TO ALL
 APPLICABLE FEDERAL MOTOR VEHICLE
 SAFETY STANDARDS, [AND BUMPER
 AND THEFT PREVENTION STANDARDS,
 IF APPLICABLE] IN EFFECT IN:

MO: MARCH YR: 2022

VEHICLE IDENTIFICATION NUMBER:

1FDFE4FN5NDC35530

VEHICLE TYPE: SHUTTLE BUS

S/N: F24WC210282

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OBJECTIVE

1. To define the process of performing leak test on completed vehicles.

RESPONSIBILITIES

2. Manufacturing management is responsible for assigning the properly qualified employees to perform leak testing.
3. The inspector is responsible for conducting the leak test and properly completing the inspection forms.
4. The Quality department is responsible for the oversight and management of the leak test process.

PERFORM LEAK TEST

5. Use the proper form for the vehicle being tested:
 - 5.1 F-QLT-0020 for 4 section school bus.
 - 5.2 F-QLT-0021 for 5 section school bus.
 - 5.3 F-QLT-0015 for 6 section school bus.
 - 5.4 F-QLT-0004 for 24' commercial bus.
 - 5.5 F-QLT-0005 for 28' commercial bus.
6. Enter the job #, VIN #, date, and name on the form.
7. Circle yes/no if the vehicle has a wheelchair lift.

8. Ensure all doors, windows, hatches etc. are closed.
9. Perform the leak test:
 - 9.1 Turn on the water valve.
 - 9.2 Verify that water is spraying.
 - 9.3 Back the bus into the spray booth.
 - 9.4 Using a light, inspect all interior areas for leaks.
 - 9.5 Identify any leaks on the inspection form by circling the area.
 - 9.6 If more than one leak is found, number the circles, starting with 1.
 - 9.7 Allow the system to spray for 30 minutes. Note that the inspector stays inside the bus for the duration of the test.
 - 9.8 Drive the bus out of the booth.
 - 9.9 Shut off the water valve.
 - 9.10 If no leaks are found, file the completed form with the job traveler.
 - 9.11 On the back of the form, check the appropriate box under "Test Results".
 - 9.12 Investigate the root cause of any leak(s) and repair as necessary.
 - 9.13 On the back of the form, enter the leak # and the corrective action taken by describing the repair.
10. Notify the line manager if assistance is needed to make the proper repairs.
11. After repairs are completed, perform another leak test as noted in item 9 above.
12. Repeat the process until no leaks are identified.
13. When the vehicle passes inspection, the inspector files the completed form with the traveler.
14. The inspector notifies the line manager that the bus has passed inspection.

END OF PROCESS

FEDERAL TRANSIT BUS TEST

**Performed for the Federal Transit Administration U.S. DOT
In accordance with 49 CFR, Part 665**

**Manufacturer: Endera Motors, LLC
Bus Model: B5**

**Partial Test
7 Year / 200,000 Miles**

May 2024

Report Number: LTI-BT-R2024-01-P

**The Thomas D. Larson
Pennsylvania Transportation Institute
201 Transportation Research Building
The Pennsylvania State University
University Park, PA 16802
(814) 865-1891**

**Bus Testing and Research Center
2237 Plank Road
Duncansville, PA 16635
(814) 695-3404**



PennState
College of Engineering

**LTI BUS RESEARCH
AND TESTING CENTER**

FEDERAL TRANSIT BUS TEST

Performed for the Federal Transit Administration, U.S. DOT
1200 New Jersey Avenue, SE
Washington, DC 20590

In accordance with 49 CFR Part, 665

Endera Motors, LLC
804 North Pratt Street
Ottawa, OH 45875

Bus Model: B5

Partial Test
7 Year / 200,000 Miles

Report Number: LTI-BT-R2024-01-P



David Klinikowski

Quality Authorization

Director, Bus Research
and Testing Center

Title

May 14, 2024

Date

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EXECUTIVE SUMMARY

TEST HIGHLIGHTS

The information in this report pertains only to this specific bus, as received from the manufacturer for testing.

The Check-In section of the report provides a description of the bus and specifies its major components. The following table gives the salient specifications.

Manufacturer	Endera Motors, LLC
Model	B5
Chassis Make/Model	Ford / E-450
Chassis Modified	Yes
Overall Length	25 Feet, 6.5 Inches
Fuel	Gasoline
Service Life	7 Year / 200,000 Mile Partial Test
Baseline Report	PTI-BT-R1212
Number of Seats (including driver)	15 or 13 and 1 wheelchair
Manufacturer-Designated Standing Passenger Capacity	0
Gross Vehicle Weight used for testing	12,300 lb.
Gross Vehicle Weight Rating	14,500 lb.
Mileage at Delivery	19
Test Start Date	February 5, 2024
Test Completion Date	April 3, 2024
Report Issuance Date	May 14, 2024

The measured curb weight was 3,430 lb. for the front axle and 6,320 lb. for the rear axle, resulting in a total measured curb weight of 9,750 lb. There are 15 seats including the driver (two of the seats stow away to make room for one wheelchair position) and free floor space for 8 standing passengers bringing the potential total passenger capacity to 23. However, a placard shows that there are to be no standing passengers, although handholds are provided for standees in this bus. Therefore, the gross load represents 13 seated passengers, including the driver and one wheelchair only. Gross load is calculated as $(150 \text{ lb.} \times 13) + (600 \text{ lb.} \times 1) = 2,550 \text{ lb.}$ At full declared capacity, the measured gross vehicle weight was 12,300 lb. There is a potential to overload this bus with the available floor space for standing passengers.

This vehicle has a modified chassis. The chassis was lengthened 18 inches between the axles and 17 inches at the rear of the vehicle.

The FTA determined that this bus be tested for Check-in, Preventative Maintenance, Reliability, Structural Distortion, Structural Durability, and Interior Noise; the baseline full Bus Testing report for this test is PTI-BT-R1212.

ABBREVIATIONS AND ACRONYMS

ABS	- anti-skid braking system
ABTC	- Altoona Bus Test Center
A/C	- air conditioner, or air conditioning
AC	- alternating current
ADA	- American Disability Act
CDCTS	- chassis dynamometer test control system
CVS	- constant volume sampling
CW	- curb weight (bus weight including maximum fuel, oil, and coolant; but without passengers or driver)
dB(A)	- decibels with reference to 0.0002 microbar as measured on the "A" scale
DC	- direct current
DIR	- test director
DR	- bus driver
EPA	- Environmental Protection Agency
GAWR	- gross axle weight rating
GVL	- gross vehicle load (150 lb. for every designed passenger seating position, for the driver, and for each 1.5 sq ft of free floor space)
GVW	- gross vehicle weight (curb weight plus gross vehicle load)
GVWR	- gross vehicle weight rating
HD-UDDS	- Heavy Duty-Urban Dynamometer Driving Schedule
LTI	- Larson Transportation Institute
mpg	- miles per gallon
mph	- miles per hour
PM	- Preventive maintenance
PSTT	- Penn State Test Track
rpm	- revolutions per minute
SAE	- Society of Automotive Engineers
SCF	- Standard cubic foot
SCH	- test scheduler
SA	- staff assistant
SLW	- seated load weight (curb weight plus 150 lb. for every designed passenger seating position and for the driver)
TD	- test driver
TECH	- test technician
TM	- track manager
TP	- test personnel
Wh	- Watt hour

TEST BUS CHECK-IN

I. OBJECTIVE

The objective of this task is to log in the test bus, assign a bus number, complete the vehicle data form, and perform a safety check.

II. TEST DESCRIPTION

The test consisted of assigning a bus test number to the bus, cleaning the bus, completing the vehicle data form, obtaining any special information and tools from the manufacturer, determining a testing schedule, performing an initial safety check, and performing the manufacturer's recommended preventive maintenance. In compliance with federal regulation 49 CFR Part 567, the manufacturer affixed a certification label, "VIN Tag", that certifies the vehicle conforms to all applicable federal motor vehicle safety standards.

III. DISCUSSION

The check-in procedure is used to identify in detail the major components and configuration of the bus.

The test bus consisted of an Endera Motors, LLC, model B5 bus. The bus has a front driver's door rear of the front axle and a curbside passenger door rear of the front axle. There is an ADA door equipped with a Braun Corporation / NCL919FIBHB-2 electric fold out lift located on the curbside behind the rear axle. There is also an emergency exit door located at the rear of the bus. Power is provided by a gasoline-fueled, Ford Motor Co. 7.3L V8 engine coupled to Ford Motor Co. Torqshift 6 transmission.

The measured curb weight was 3,430 lb. for the front axle and 6,320 lb. for the rear axle, resulting in a total measured curb weight of 9,750 lb. There are 15 seats including the driver (two of the seats stow away to make room for one wheelchair position) and free floor space for 8 standing passengers bringing the potential total passenger capacity to 23. However, a placard shows that there are to be no standing passengers, although handholds are provided for standees in this bus. Therefore, the gross load represents 13 seated passengers, including the driver and one wheelchair only. Gross load is calculated as $(150 \text{ lb.} \times 13) + (600 \text{ lb.} \times 1) = 2,550 \text{ lb.}$ At full declared capacity, the measured gross vehicle weight was 12,300 lb. There is a potential to overload this bus with the available floor space for standing passengers.

This vehicle has a modified chassis. The chassis was lengthened 18 inches between the axles and 17 inches at the rear of the vehicle.

VEHICLE DATA FORM

Page 1 of 7

Bus Number: 2024-01-P	Date of Check-In: 02/05/24
Bus Manufacturer: Endera Motors, LLC	Vehicle Identification Number (VIN): 1FD4E4FN3PDD15055
Model Number: B5	Chassis Mfr./Mod. #: Ford / E-450
Personnel: S.R., J.M., T.G. & P.D.	Starting Odometer Reading: 19 miles

WEIGHT:

Individual Wheel Reactions:

Weights (lb.)	Front Axle		Middle Axle		Rear Axle	
	Curb	Street	Curb	Street	Curb	Street
CW	1,600	1,830	N/A	N/A	3,420	2,900
SLW	1,670	2,070	N/A	N/A	4,470	4,090
GVW	1,670	2,070	N/A	N/A	4,470	4,090

Total Weight Details:

Weight (lb.)	CW	SLW	GVW	GAWR
Front Axle	3,430	3,740	3,740	5,000
Middle Axle	N/A	N/A	N/A	N/A
Rear Axle	6,320	8,560	8,560	9,600
Total	9,750	12,300	12,300	GVWR: 14,500

Dimensions:

Body Length (ft/in)	24 / 7
Length Over Bumpers (ft/in)	25 / 6.5
Overall Length with Add-ons (ft/in)	25 / 6.5
Width Excluding Mirrors (in)	96.9
Width Including Mirrors (in)	109.2 (adjusted to operating position)
Height of bus (in)	112.6
Overall Height of bus (in)	119.3
Front Overhang (in)	35.2
Rear Overhang (in)	95.1
Wheelbase (in)	176.3
Wheel Track (in)	Front: 67.7
	Middle: N/A
	Rear: 77.7

VEHICLE DATA FORM

Page 2 of 7

Bus Number: 2024-01-P	Date: 02/05/24
-----------------------	----------------

CLEARANCES:

Lowest Point Outside Front Axle	Location: Valance attached to underside of bumper Clearance(in): 10.0
Lowest Point Outside Rear Axle	Location: Curbside exhaust clamp threads Clearance(in): 10.8
Lowest Point between Axles	Location: Forward corner of bottom entry step Clearance(in): 9.1
Front Bumper Height (in)	10
Rear Bumper Height (in)	18.7 (at curbside corner)
Ground Clearance at the center (in)	9.6 at driveline loop / 15.3 to body panel
Front Approach Angle (deg)*	15.9
Rear Approach Angle (deg)*	9.3
Ramp Clearance Angle (deg)	7.5
Aisle Width (in)	14.3 (at narrowest point)
Inside Standing Height at Center Aisle (in)	78.8

*measurements used to calculate approach and departure angles are taken from the centerline of the axles.

BODY DETAILS:

Body Structural Type	Integral		
Frame Material	Steel		
Body Material	Fiberglass		
Floor Material	Plywood		
Roof Material	Fiberglass		
Windows Type	<input checked="" type="checkbox"/> Fixed	<input checked="" type="checkbox"/> Movable	
Window Mfg./Model No.	LCI / AS3 M532 DOT 1065		
Number of Doors	2 Front (1 streetside, driver, 1 curbside, passenger) 2 Rear (1 curbside ADA and 1 rear emergency exit)		
Mfr. / Model No.	Front: Streetside: Ford Motor Co / OEM Front: Curbside: A&M Systems / 163483A7C1 Rear: Curbside ADA: Lippert Components / 2021120553 Rear: Emergency Exit: Lippert Components / 2021142308		
Dimension of Each Door (in)	Front: Streetside: 31.9 x 54.6 Curbside: 34.1 x 81.9 Rear: Curbside ADA: 46.5 x 71.0 Rear: Emergency Exit: 30.1 x 52.5		
Passenger Seat Type	<input checked="" type="checkbox"/> Cantilever (ADA position)	<input checked="" type="checkbox"/> Pedestal	<input type="checkbox"/> Other
Mfr. / Model No.	Freedman Seating Co. / Mid-High Feather Weight		
Driver Seat Type	<input type="checkbox"/> Air	<input type="checkbox"/> Spring	<input checked="" type="checkbox"/> Other - Electric
Mfr. / Model No.	Ford Motor Co. / OEM		
Number of Seats (including Driver)	15 or 13 and 1 wheelchair		

VEHICLE DATA FORM

Page 3 of 7

Bus Number: 2024-01-P	Date: 02/05/24
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BODY DETAILS (Contd.)

Free Floor Space (ft ²)	12.5
Height of Each Step at Normal Position (in)	Front Passenger: 1. 12.0 2. 9.6 3. 8.5 4. N/A
	Front Driver's Door: 1. 13.8 2. 5.7 3. 6.8 4. N/A
	Rear Emergency Exit: 1. 31.8 2. N/A 3. N/A 4. N/A
	ADA Door: 1. 32.8 2. N/A 3. N/A 4. N/A
Step Elevation Change - Kneeling (in)	N/A

ENGINE

Type	<input type="checkbox"/> C.I.	<input type="checkbox"/> Alternate Fuel	
	<input checked="" type="checkbox"/> S.I.	<input type="checkbox"/> Other (explain)	
Mfr. / Model No.	Ford Motor Co. / 7.3L V8		
Engine Power	Not available		
Engine Torque	Not available		
Location	<input checked="" type="checkbox"/> Front	<input type="checkbox"/> Rear	<input type="checkbox"/> Other (explain)
Fuel Type	<input checked="" type="checkbox"/> Gasoline	<input type="checkbox"/> CNG	<input type="checkbox"/> Methanol
	<input type="checkbox"/> Diesel	<input type="checkbox"/> LNG	<input type="checkbox"/> Other (explain)
Alternator (Generator) Mfr./Model No.	Ford Motor Co. / 3885		
Maximum Rated Output (Volts / Amps)	12 / 210		
Air Compressor Mfr. / Model No.	N/A		
Maximum Capacity (ft ³ / min)	N/A		
Starter Type	<input checked="" type="checkbox"/> Electrical	<input type="checkbox"/> Pneumatic	<input type="checkbox"/> Other (explain)
Starter Mfr. / Model No.	Ford Motor Co. / V4B1B		
Low Voltage Battery	<input checked="" type="checkbox"/> 12 Volt <input type="checkbox"/> 24 Volt		
Mfr. / Model No.	Ford Motor Co. / ML-BXT-65-750		

VEHICLE DATA FORM

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Bus Number: 2024-01-P	Date: 02/05/24
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TRANSMISSION

Transmission Type	<input type="checkbox"/> Manual	<input checked="" type="checkbox"/> Automatic	<input type="checkbox"/> Load Sensing Adaptive
Mfr. / Model No.	Ford Motor Co. / Torqshift 6		
Control Type	<input checked="" type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical	<input type="checkbox"/> Other
Integral Retarder	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

SUSPENSION

Number of Axles	2		
Front Axle Type	<input checked="" type="checkbox"/> Independent	<input type="checkbox"/> Beam Axle	
Mfr. / Model No.	Ford Motor Co. / Part #s: 8C24-3007-BD, 8C24-3006-BD		
GAWR (lb.)	5,000		
Axle Ratio (if driven)	N/A		
Suspension Type	<input type="checkbox"/> Air	<input checked="" type="checkbox"/> Spring	<input type="checkbox"/> Other
Mfr./Model No.	Ford Motor Co. / OEM		
No. of Shock Absorbers	2		
Mfr. / Model No.	Ford Motor Co. / 18045DA / F135S3		
Sway bar Equipped	<input checked="" type="checkbox"/> Front	<input checked="" type="checkbox"/> Rear	
Middle Axle Type	<input type="checkbox"/> Independent	<input type="checkbox"/> Beam Axle	
Mfr. / Model No.	N/A		
Axle Ratio (if driven)	N/A		
Suspension Type	<input type="checkbox"/> Air	<input type="checkbox"/> Spring	<input type="checkbox"/> Other
No. of Shock Absorbers	N/A		
Mfr. / Model No.	N/A		
Rear Axle Type	<input type="checkbox"/> Independent	<input checked="" type="checkbox"/> Beam Axle	
Mfr. / Model No.	Dana / LC 24 BD		
GAWR (lb.)	9,600		
Axle Ratio (if driven)	4.56		
Suspension Type	<input type="checkbox"/> Air	<input checked="" type="checkbox"/> Spring	<input type="checkbox"/> Other
Mfr. / Model No.	Ford Motor Co. / OEM		
No. of Shock Absorbers	2		
Mfr. / Model No.	Ford Motor Co. / 18080 DC / F130 S1		

VEHICLE DATA FORM

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Bus Number: 2024-01-P	Date: 02/05/24
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WHEELS & TIRES

Front	Wheel Mfr./ Model No.	Fumagalli / Not available
	Wheel weight rating (lb)	Not available
	Tire Mfr./ Model No.	Hankook DynaPro HT LT 225 75 16
	Tire weight rating (lb)	2,680 (single)
Rear	Wheel Mfr./ Model No.	Fumagalli / Not available
	Wheel weight rating (lb)	Not available
	Tire Mfr./ Model No.	Hankook DynaPro HT LT 225 75 16
	Tire weight rating (lb)	2,470 (dual)

BRAKES

Front Axle Brakes Type	<input type="checkbox"/> Cam	<input checked="" type="checkbox"/> Disc	<input type="checkbox"/> Other (explain)
Mfr. / Model No.	Ford Motor Co. / OEM		
Middle Axle Brakes Type	<input type="checkbox"/> Cam	<input type="checkbox"/> Disc	<input type="checkbox"/> Other
Mfr. / Model No.	N/A		
Rear Axle Brakes Type	<input type="checkbox"/> Cam	<input checked="" type="checkbox"/> Disc	<input type="checkbox"/> Other (explain)
Mfr. / Model No.	Ford Motor Co. / OEM		
Parking Brake Mfr. / Model No.	Ford Motor Co. / OEM		

HVAC

Driver Heating System Type	<input checked="" type="checkbox"/> Engine Coolant	<input type="checkbox"/> Electric	<input type="checkbox"/> Other (explain)
Capacity (Btu/hr)	15,000		
Mfr./Model No.	Ford Motor Co. / OEM		
Passenger Heating System Type	<input checked="" type="checkbox"/> Engine Coolant	<input type="checkbox"/> Electric	
Capacity (Btu/hr)	55,000		
Mfr./Model No.	Valeo / TM 16		
Auxiliary Heater	<input checked="" type="checkbox"/> Yes: Type: <u>Under seat mounted</u> <input type="checkbox"/> No		
Mfr./Model No.	Valeo / 22023B		
Driver Air Conditioner	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Location	Engine Compartment		
Capacity (Btu/hr)	15,000		
A/C Compressor Mfr./Model Number	Ford Motor Co. / RS-20		
Passenger Air Conditioner	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

VEHICLE DATA FORM

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Bus Number: 2024-01-P	Date: 02/05/24
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HVAC (cont.)

Passenger Air Conditioner	<input checked="" type="checkbox"/> Engine Driven <input type="checkbox"/> Electric <input type="checkbox"/> Other (explain)
Location	Rear rooftop mounted
Capacity (Btu/hr)	55,000
A/C Compressor Mfr./Model No.	Valeo / TM16 *

*Valeo added an additional compressor to engine compartment for roof-mounted passenger cabin HVAC system

STEERING

Steering Gear Box Type	Hydraulic
Mfr. / Model No.	Ford Motor Co. / OEM
Steering Wheel Diameter	15.7"
Number of turns (lock to lock)	4

OTHERS

ADA Ramp	Location: N/A	Type: N/A
ADA Lift	Location: Rear, curbside	Type: Electric Fold-out
Mfr. / Model No.	Braun Corporation / NCL919FIBHB-2	
Emergency Exit	Location: Window Door	Number: 2 3
Fire Suppression System Mfr. / Model No.	Badger Fire Protection / 5MB-6H	

CAPACITIES

Fuel Tank Capacity (gallons)	55
Engine Crankcase Capacity (gallons)	2 (per Ford E-450 manual)
Transmission Capacity (quarts)	17.4 (per Ford E-450 manual)
Differential Capacity (quarts)	4.86 (per Ford E-450 manual)
Engine Cooling System Capacity (quarts)	20.3 (per Ford E-450 manual)
Power Steering Fluid Capacity (quarts)	Fill to line (per Ford E-450 manual)

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Date: 02/05/24

☐ Service manual and operator's manual documentation available
☒ Service manual and operator's manual documentation NOT available

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COMPONENT/SUBSYSTEM INSPECTION FORM

Page 1 of 1

Bus Number: 2024-01-P	Date: 02/05/24
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Subsystem	Checked	Initials	Comments
Engine	✓	S.R.	7.3 L V8
Fuel System	✓	S.R.	Fuel filler neck static ground strap was not attached. Strap was attached prior to testing.
Transmission	✓	S.R.	None noted.
Exhaust	✓	S.R.	Canister hose that runs along the frame rail on the driver's side has a kink in it. Hose was straightened prior to testing.
Engine Cooling System	✓	S.R.	None noted.
Electronics Cooling System	N/A	S.R.	N/A
Drive Motor Cooling System	N/A	S.R.	N/A
Drive Motors/Axle	N/A	S.R.	N/A
High Voltage Batteries	N/A	S.R.	N/A
Body and Sheet Metal	✓	S.R.	None noted.
Frame	✓	S.R.	Frame modified.
Steering	✓	S.R.	None noted.
Suspension	✓	S.R.	None noted.
Interior/Seating	✓	S.R.	None noted.
Interior Fasteners	✓	S.R.	None noted.
Axles	✓	S.R.	None noted.
Brakes	✓	S.R.	None noted.
Tires/Wheels	✓	S.R.	None noted.
Air Conditioning Heating and Ventilation	✓	S.R.	Ford Motor Co. / Valeo
Accessories	✓	S.R.	None noted.
ADA Lift System	✓	S.R.	None noted.
ADA Ramp System	N/A	S.R.	N/A
Low Voltage Batteries	✓	S.R.	None noted.
Emergency Exits	✓	S.R.	None noted.
Fire Suppression System	✓	S.R.	Fire extinguisher

CHECK - IN



ENDERA MOTORS, LLC B5



CHECK - IN CONT.



ENDERA MOTORS, LLC B5



CHECK - IN CONT.



**BRAUN CORPORATION NCL919FIBHB-2
ELECTRIC FOLD OUT LIFT**



OPERATOR'S AREA

CHECK - IN CONT.



INTERIOR FROM FRONT



INTERIOR FROM REAR

CHECK - IN CONT.

INCOMPLETE VEHICLE MFD. BY FORD MOTOR COMPANY

DATE: 06/22
 FRONT GAWR: 2268 KG (5000 LB)
 WITH LT225/75R16E 115/112S
 16x6.0K
 AT 520 kPa/ 75 PSI COLD
 VIN: 1FDFE4FN3PDD15055

TIRES
RIMS
DUAL

GVWR: 6577 KG (14500 LB)
 REAR GAWR: 4355 KG (9600 LB)
 WITH LT225/75R16E 115/112S
 16x6.0K
 AT 550 kPa/ 80 PSI COLD

Equipped with the Ford Shuttle Bus Prep Pkg

EXT PNT: YZ RC: 58 DSO:

WB	INT TR	TP/PS	R	AXLE	TR	SPR
158	ME		7	83	P	XXBB
						ULN

▽ 5U5A-3520472-AA

INCOMPLETE VEHICLE CHASSIS TAG FROM FORD MOTOR COMPANY

MFD. BY: ENDERA MOTORS, LLC
 OTTAWA, OH
 DATE OF MFR. MO. 11 YR. 2023
 GVWR: 6,577 KG (14,500 LB)
 GAWR-FRONT:
 2,268 KG (5,000 LB)
 WITH LT225/75R16E
 16X6.0K RIMS, @ 520 KPA
 (75 PSI) COLD SINGLE
 GAWR-INTERMEDIATE (1):
 KG (LB)
 WITH RIMS, @ TIRES,
 (PSI) COLD KPA
 GAWR-INTERMEDIATE (2):
 KG (LB)
 WITH RIMS, @ TIRES,
 (PSI) COLD KPA
 GAWR-REAR:
 4,355 KG (9,600 LB)
 WITH LT225/75R16E
 16X6.0K RIMS, @ 550 KPA
 (80 PSI) COLD DUAL

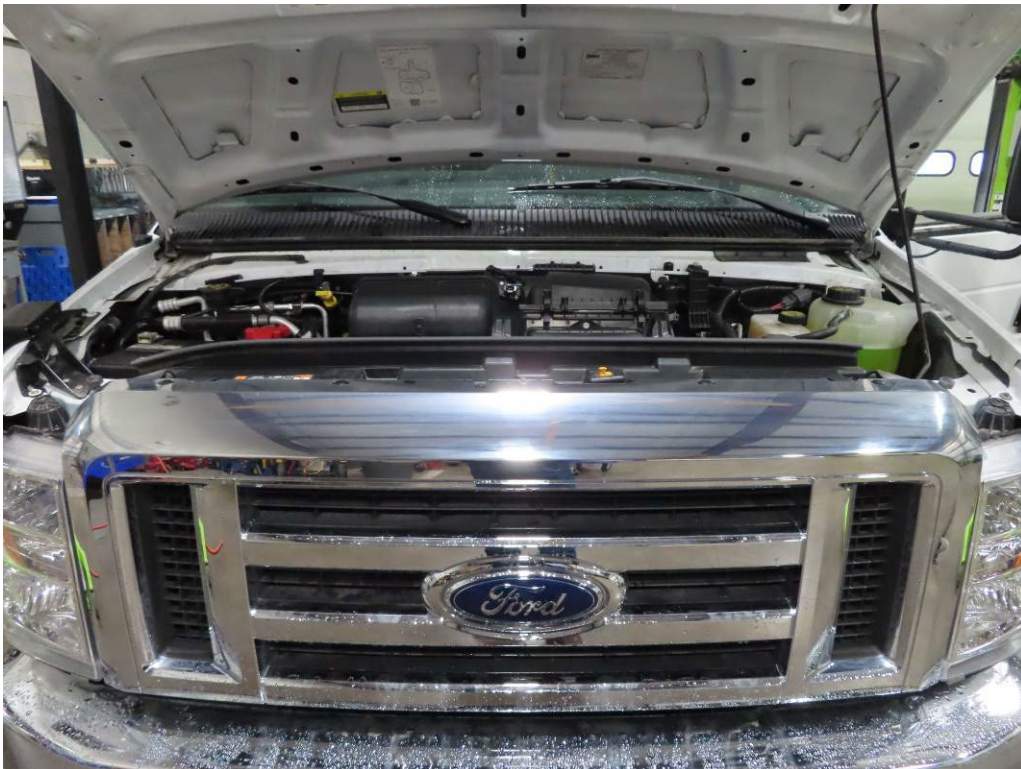
THIS VEHICLE HAS BEEN COMPLETED
 IN ACCORDANCE WITH THE PRIOR
 MANUFACTURERS' MD, WHERE
 APPLICABLE. THIS VEHICLE
 CONFORMS TO ALL APPLICABLE
 FEDERAL MOTOR VEHICLE SAFETY
 STANDARDS, (AND BUMPER AND
 THEFT PREVENTION STANDARDS, IF
 APPLICABLE) IN EFFECT IN:
 MO. NOVEMBER YR. 2023
 VEHICLE IDENTIFICATION NUMBER
 1FDFE4FN3PDD15055
 VEHICLE TYPE: SHUTTLE BUS
 VIN: F75WC230487

MANUFACTURER'S TAG

CHECK - IN CONT.



STANDEE PLACARD



ENGINE COMPARTMENT

CHECK - IN CONT.



UNDERSIDE OF BUS – FRONT TO REAR



UNDERSIDE OF BUS – REAR TO FRONT

1.2 SERVICING, PREVENTIVE MAINTENANCE, AND REPAIR AND MAINTENANCE DURING TESTING

1.2-I. TEST OBJECTIVE

The objective of this test is to collect maintenance data about the servicing, preventive maintenance, and repair.

1.2.-II. TEST DESCRIPTION

The test was conducted by operating the bus and collecting the following data on work order forms and a driver log.

1. Scheduled Maintenance
 - a. Bus number
 - b. Date
 - c. Mileage
 - d. Results of scheduled inspections
 - e. Description of malfunction (if any)
 - f. Repair action and parts used (if any)
 - g. Labor-hours

2. Unscheduled Maintenance
 - a. Bus number
 - b. Date
 - c. Mileage
 - d. Description of malfunction
 - e. Place and time of malfunction (e.g., in service or undergoing inspection)
 - f. Repair action and parts used
 - g. Labor-hours

The bus was operated in accelerated durability service. While typical items are given below, the specific service schedule was that specified by the manufacturer.

- A. Service
 1. Fueling
 2. Consumable checks
 3. Interior cleaning

- B. Preventive Maintenance
 1. Brake adjustments
 2. Lubrication
 3. 3,000 mi (or manufacturer recommended) inspection

4. Oil and filter change inspection
5. Major inspection
6. Tune-up

C. Periodic Repairs

1. Brake reline*
2. Transmission change
3. Engine change*
4. Windshield wiper motor change
5. Stoplight bulb change*
6. Towing operations
7. Hoisting operations

*These items are attended to if found necessary, while the others in the list are removed/replaced/tested for all buses undergoing a full test.

1.2-III. DISCUSSION

Servicing and preventive maintenance were performed at manufacturer-specified intervals. The following Scheduled Maintenance Form lists the mileage, items serviced, the service interval, and amount of time required to perform the maintenance.

The Unscheduled Maintenance List along with related photographs is included in Section 5.7, Structural Durability. This list supplies information related to failures that occurred during the durability portion of testing. The Unscheduled Maintenance List includes the date and mileage at which the malfunction was detected, a description of the malfunction and repair, and the time required to perform the repair.

SCHEDULED MAINTENANCE
 Endera Motors, LLC Bus #2024-01-P
 (Page 1 of 7)

DATE	TEST MILES	SERVICE	ACTIVITY/OBSERVATIONS	DOWN TIME	LABOR HOURS
02/13/24	972	P.M./Inspection	Steering linkage, tie rods, driveline components all checked; all fluids checked. Inspected frame, body and suspension. Tailpipe hanger is broken.	4.00	4.00
02/19/24	2,037	P.M./Inspection	Steering linkage, tie rods, driveline components all checked; all fluids checked. Inspected frame, body and suspension. Bolt fell out of handrail on the curbside floor to ceiling bar coming up the entrance steps. Screws that hold the rain gutter above the entrance door broke off and pulled out of body. Rivets around entry door are breaking off. Front, middle marker light connector pulled off wires. Barrier directly in front of the first passenger seats on the streetside has a broken p-clamp and missing several bolts. Screws are coming out of the second step at the passenger entry door. Screws are missing in the back wall with the rear exit door. Two on streetside and two on curbside. Rear shackles are worn on both the streetside and curbside. Body support bars are bowing on both sides. Measurements were taken and written on frame.	4.00	4.00

SCHEDULED MAINTENANCE
Endera Motors, LLC Bus #2024-01-P
(Page 2 of 7)

DATE	TEST MILES	SERVICE	ACTIVITY/OBSERVATIONS	DOWN TIME	LABOR HOURS
02/23/24	3,409	P.M./Inspection	Steering linkage, tie rods, driveline components all checked; all fluids checked. Inspected frame, body and suspension. Body support bars are bowing on both sides– No change. Two small cracks in fiberglass on the roof on the streetside just above the driver's door. Front sway bar on the streetside is hitting the body. Rear leaf spring on the streetside is hitting rear coolant lines and p-clamp. Crack on underside of body on streetside on a weld between the driver and passenger area.	4.00	4.00
02/29/24	4,561	P.M./Inspection	Steering linkage, tie rods, driveline components all checked; all fluids checked. Inspected frame, body and suspension. Body support bars are bowing on both sides– No change. Two small cracks in fiberglass on the roof on the streetside just above the driver's door – No change. Front sway bar on the streetside is hitting the body – No change. Crack on underside of body on streetside on a weld between the driver and passenger area – crack is propagating. Crack on underside of body at curbside above catalytic converter and heat shield. Cracked weld on streetside motor mount. A crack has formed originating from a spot weld to the streetside core support, approximately 1" in length; directly beneath	4.00	4.00

SCHEDULED MAINTENANCE
Endera Motors, LLC Bus #2024-01-P
(Page 3 of 7)

DATE	TEST MILES	SERVICE	ACTIVITY/OBSERVATIONS	DOWN TIME	LABOR HOURS
02/29/24	4,561	P.M./Inspection (Continued)	the power steering reservoir. Broken p-clamps on plexiglass barrier behind driver. Rear spring shackles showing wear.		
03/20/24	5,598	P.M./Inspection	Steering linkage, tie rods, driveline components all checked; all fluids checked. Inspected frame, body and suspension. Body support bars are bowing on both sides– No change. Two small cracks in fiberglass on the roof on the streetside just above the driver's door – No change. Streetside of front sway bar is hitting the body – No change. Crack on underside of body on streetside on a weld between the driver and passenger area – was repaired with rivets, but crack has spread to the edge of the plate. Crack on underside of body at curbside above catalytic converter and heat shield – was repaired with rivets, but crack has spread. A crack has formed originating from a spot weld to the streetside core support, approximately 1" in length; directly beneath the power steering reservoir – No change. Rear spring shackles showing wear – continue to monitor. Backside of curbside front wheel well/inner fender above frame rail is cracked. Small crack developing on underside of body at streetside under rear bolt on driver's seat	4.00	4.00

SCHEDULED MAINTENANCE
Endera Motors, LLC Bus #2024-01-P
(Page 4 of 7)

DATE	TEST MILES	SERVICE	ACTIVITY/OBSERVATIONS	DOWN TIME	LABOR HOURS
03/20/24	5,598	P.M./Inspection (Continued)	outside frame rail. Crack developed in forward vertical beam where it is welded to square horizontal tube under entry step. Forward, lower bolt fell out of curbside mirror.		
03/27/24	6,863	P.M./Inspection	Steering linkage, tie rods, driveline components all checked; all fluids checked. Inspected frame, body and suspension. Body support bars are bowing on both sides– No change. Two small cracks in fiberglass on the roof on the streetside just above the driver's door – No change. Streetside of front sway bar is hitting the body – Now wearing into sway bar mount. Crack on underside of body on streetside on a weld between the driver and passenger area has spread to the edge of the plate – no further change. Crack on underside of body at curbside above catalytic converter and heat shield – No further spreading of crack. Crack originating from a spot weld to the streetside core support, approximately 1" in length; directly beneath the power steering reservoir – No change. Rear spring shackles showing wear – continue to monitor – No change. Backside of curbside front wheel well/inner fender above frame rail is cracked – Crack has spread.	4.00	4.00

SCHEDULED MAINTENANCE
Endera Motors, LLC Bus #2024-01-P
(Page 5 of 7)

DATE	TEST MILES	SERVICE	ACTIVITY/OBSERVATIONS	DOWN TIME	LABOR HOURS
03/27/24	6,863	P.M./Inspection (Continued)	<p>Small crack on underside of body at streetside under rear bolt on driver's seat outside frame rail – No change.</p> <p>Crack in forward vertical beam where it is welded to square horizontal tube under entry step – Unable to tell if crack has spread due to location.</p> <p>Windshield washer tank is leaking.</p> <p>A crack was discovered under the body where rivets were installed previously.</p> <p>A crack has formed to the rear of the crack previously identified in the front wheel well inner fender above the frame rail.</p> <p>Two cracks next to each other on the streetside forward part of the inner fender above the frame forward of the coil spring.</p> <p>The hood is hitting the curbside mirror bracket and the hood is cracked.</p> <p>Barrier behind driver has broken p-clamps at the top and bottom.</p> <p>Two bolts fell out of the barrier at the entry steps.</p> <p>Screws missing in rear panel by rear A/C unit.</p> <p>Oil change light was on – Oil and filter were changed.</p>		
04/01/24	7,517	P.M./Inspection	<p>Steering linkage, tie rods, driveline components all checked; all fluids checked.</p> <p>Inspected frame, body and suspension.</p> <p>Body support bars are bowing on both sides– No change.</p> <p>Two small cracks in fiberglass on the roof on</p>	4.00	4.00

SCHEDULED MAINTENANCE
Endera Motors, LLC Bus #2024-01-P
 (Page 6 of 7)

DATE	TEST MILES	SERVICE	ACTIVITY/OBSERVATIONS	DOWN TIME	LABOR HOURS
04/01/24	7,517	P.M./Inspection (Continued)	<p>the streetside just above the driver's door – No change.</p> <p>Streetside of front sway bar is hitting the body, wearing into sway bar mount – No change.</p> <p>Crack on underside of body on streetside on a weld between the driver and passenger area has spread to the edge of the plate – no further change.</p> <p>Crack on underside of body at curbside above catalytic converter and heat shield – No further spreading of crack.</p> <p>Crack originating from a spot weld to the streetside core support, approximately 1" in length; directly beneath the power steering reservoir – No change.</p> <p>Rear spring shackles showing wear –No change.</p> <p>Backside of curbside front wheel well/inner fender above frame rail is cracked – Crack has spread.</p> <p>Small crack developing on underside of body at streetside under rear bolt on driver's seat outside frame rail – No change.</p> <p>Crack in forward vertical beam where it is welded to square horizontal tube under entry step – Unable to tell if crack has spread due to location.</p> <p>Crack under the body where rivets were installed previously – No change.</p> <p>Crack to the rear of the crack previously identified in the front wheel well inner fender above the frame rail has spread further.</p>		

SCHEDULED MAINTENANCE
Endera Motors, LLC Bus #2024-01-P
(Page 7 of 7)

DATE	TEST MILES	SERVICE	ACTIVITY/OBSERVATIONS	DOWN TIME	LABOR HOURS
04/01/24	7,517	P.M./Inspection (Continued)	Two cracks next to each other on the streetside forward part of the inner fender above the frame forward of the coil spring – No change. The hood is hitting the curbside mirror bracket and the hood is cracked – No change. Crack in curbside inner fender is missing a piece and the spot weld broke loose rear of where it attaches to the rocker panel area.		

2. RELIABILITY - DOCUMENTATION OF BREAKDOWN AND REPAIR TIMES DURING TESTING

2-I. TEST OBJECTIVE

The objective of this test is to document unscheduled breakdowns, repairs, down time, and repair time that occur during testing.

2-II. TEST DESCRIPTION

Using the driver log and unscheduled work order forms, all significant breakdowns, repairs, labor-hours to repair, and hours out of service were recorded on the Reliability Data Form.

CLASS OF FAILURES

Classes of failures are described below:

- (a) Class 1: Physical Safety. A failure that could lead directly to Injury, a crash and/or significant physical damage.
- (b) Class 2: Road Call. A failure resulting in an en-route interruption of revenue service. Service is discontinued until the bus is replaced or repaired at the point of failure.
- (c) Class 3: Bus Change. A failure that requires removal of the bus from service during its assignments. The bus is operable to a rendezvous point with a replacement bus.
- (d) Class 4: Bad Order. A failure that does not require removal of the bus from service during its assignments but does degrade coach operation. The failure shall be reported by driver, inspector, or hostler.

2-III. DISCUSSION

A listing of breakdowns and unscheduled repairs was accumulated during the Structural Durability Test. The following Reliability Data Form lists all unscheduled repairs under classes as defined above.

The classification of repairs according to subsystem is intended to emphasize those systems which had persistent minor or more serious problems. There was a total of 26 failures involving various subsystems reported during testing. Of these failures, 24 were Class 3 and two were Class 1 failures. There were no Class 4 or Class 2 failures reported. These failures are available for review in the Unscheduled Maintenance List, located in Section 5.7 Structural Durability.

RELIABILITY DATA FORMS

Bus Number: 2024-01-P	Date: 04/03/24
Personnel: B.L.	

Subsystems	Failure Type				Labor Hours	Down Time
	Class 4 Bad Order	Class 3 Bus Change	Class 2 Road Call	Class 1 Physical Safety		
Wiper and Washer		233			0.50	0.50
		6,863			1.00	1.00
Exhaust		233			0.25	0.25
		972			0.25	0.25
		5,299			0.50	0.50
Interior		2,037			0.25	0.25
		2,037			0.25	0.25
		2,037			0.25	0.25
		3,790			0.25	0.25
		4,561			0.08	0.08
				5,299	0.25	0.25
				6,256	0.25	0.25
		6,863			0.08	0.08
		6,863			0.08	0.08
		6,863			0.08	0.08
Body Lamp Assembly		2,037			0.25	0.25
		5,598			0.50	0.50
Doors		2,037			0.25	0.25
		2,037			0.25	0.25
		2,037			0.25	0.25
Suspension		2,037			0.50	0.50
		7,517			0.50	0.50

RELIABILITY DATA FORMS

Bus Number: 2024-01-P	Date: 04/03/24
Personnel: B.L.	

Failure Type						
	Class 4 Bad Order	Class 3 Bus Change	Class 2 Road Call	Class 1 Physical Safety		
Subsystems	Mileage	Mileage	Mileage	Mileage	Labor Hours	Down Time
Electrical / HVAC		3,409			1.00	1.00
Chassis		4,561			0.25	0.25
Body		4,561			2.00	2.00
Body / Frame		7,517			4.00	4.00

5.2 STRUCTURAL STRENGTH AND DISTORTION TESTS - STRUCTURAL DISTORTION

5.2-I. TEST OBJECTIVE

The objective of this test is to observe the operation of the bus subsystems when the bus is placed in a longitudinal twist simulating operation over a curb or through a pothole.

5.2-II. TEST DESCRIPTION

With the bus loaded to GVW, each wheel of the bus was raised (one at a time) to simulate operation over a curb and the following were inspected:

1. Body
2. Windows
3. Doors
4. Roof vents
5. Special seating
6. Undercarriage
7. Engine
8. Service doors
9. Escape hatches
10. Steering mechanism

Each wheel was then lowered (one at a time) to simulate operation through a pothole and the same items inspected.

5.2-III. DISCUSSION

The test sequence was repeated ten times. The first and last test is with all wheels level. The other eight tests are with each wheel 6 inches higher and 6 inches lower than the other three wheels.

All doors, windows, escape mechanisms, engine, steering and ADA accessible devices operated normally throughout the test. The undercarriage and body indicated no deficiencies. No water leakage was observed during the test. The results of this test are indicated on the following data forms.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

Page 1 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input checked="" type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

Page 2 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input checked="" type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM
 (Note: Ten copies of this data sheet are required)
 Page 3 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input checked="" type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

Page 4 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input checked="" type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

Page 5 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input checked="" type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM
 (Note: Ten copies of this data sheet are required)
 Page 6 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input checked="" type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

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Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input checked="" type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

Page 8 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input checked="" type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

Page 9 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input checked="" type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

DISTORTION TEST INSPECTION FORM

(Note: Ten copies of this data sheet are required)

Page 10 of 10

Bus Number: 2024-01-P	Date: 02/07/24
Personnel: S.R., J.M., T.G. & P.D.	Temperature(°F): 40

Wheel Position: (check one)		
All wheels level	<input type="checkbox"/> before	<input checked="" type="checkbox"/> after
Left front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right front	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left rear	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Right center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower
Left center	<input type="checkbox"/> 6 in higher	<input type="checkbox"/> 6 in lower

	Comments
Windows	No Deficiencies.
Front Doors	No Deficiencies.
Rear Doors	No Deficiencies.
Escape Mechanisms/ Roof Vents	No Deficiencies.
Engine	No Deficiencies.
ADA Accessible/ Special Seating	No Deficiencies.
Undercarriage	No Deficiencies.
Service Doors	No Deficiencies.
Body	No Deficiencies.
Windows/ Body Leakage	No Deficiencies.
Steering Mechanism	No Deficiencies.

5.2 STRUCTURAL DISTORTION TEST



RIGHT REAR WHEEL SIX INCHES HIGHER



LEFT FRONT WHEEL SIX INCHES LOWER

5.7 STRUCTURAL DURABILITY TEST

5.7-I. TEST OBJECTIVE

The objective of this test is to perform an accelerated durability test that approximates 25 percent of the service life of the vehicle.

5.7-II. TEST DESCRIPTION

The test vehicle was driven a total of 7,500 miles; approximately 5,000 miles on the LTI Durability Test Track and approximately 2,500 miscellaneous other miles. The test was conducted with the bus operated under three different loading conditions. The first segment consisted of approximately 2,500 miles with the bus operated at GVW. The second segment consisted of approximately 1,500 miles with the bus operated at SLW. The remainder of the test, approximately 2,500 miles, was conducted with the bus loaded to CW. The loads on both axles and GVW were within their ratings with the bus loaded as specified by the manufacturer. All subsystems were running during these tests in their normal operating modes. All manufacturer-recommended servicing was followed and noted on the vehicle maintainability log. Servicing items accelerated by the durability tests were compressed by 10:1; all others were done on a 1:1 mi/mi basis. Unscheduled breakdowns and repairs were recorded on the same log as are any unusual occurrences as noted by the driver. Once a week the test vehicle was washed down and thoroughly inspected for any signs of failure. The dates on the driver's logs reflect operating times. The times when the bus was not operating for a period of time could be due to weather conditions, manufacturer's decision time/non-recurring engineering time, delay for parts delivery, holidays, etc.

5.7-III. DISCUSSION

The Structural Durability Test was started on February 7, 2024, and was completed on April 1, 2024. The first 2,500 miles were performed at a GVW of 12,300 lb. and completed on February 22, 2024. The next 1,500-mile SLW segment was performed at 12,300 lb. and completed on February 29, 2024, and the final 2,500-mile segment was performed at a CW of 9,750 lb. and completed on April 1, 2024.

The following mileage summary presents the accumulation of miles during the Structural Durability Test. The driving schedule is included, showing the operating duty cycle. A detailed plan view of the LTI Test Track Facility and Durability Test Track are attached for reference. Also, a durability element profile detail shows all the measurements of the different conditions. Finally, photographs illustrating some of the failures that were encountered during the Structural Durability Test are included. There were no uncorrected Class 1 or Class 2 failures and the unscheduled maintenance totaled 14.07 hours.

Endera Motors, LLC Bus # 2024-01-P

MILEAGE DRIVEN/RECORDED FROM DRIVER'S LOGS

DATE	TOTAL DURABILITY TRACK	TOTAL OTHER MILES	TOTAL
02/05/24 To 02/11/24	527.00	71.00	598.00
02/12/24 To 02/18/24	1192.00	148.00	1340.00
02/19/24 To 02/25/24	658.00	948.00	1606.00
02/26/24 To 03/03/24	623.00	389.00	1012.00
03/04/24 To 03/10/24	0.00	0.00	0.00
03/11/24 To 03/17/24	430.00	159.00	589.00
03/18/24 To 03/24/24	966.00	137.00	1103.00
03/25/24 To 03/31/24	604.00	611.00	1215.00
04/01/24 To 04/07/24	0.00	47.00	47.00
Total	5000.00	2510.00	7510.00

Driving Schedule for Bus Operation on the Durability Test Track.

STANDARD OPERATING SCHEDULE

Monday through Friday

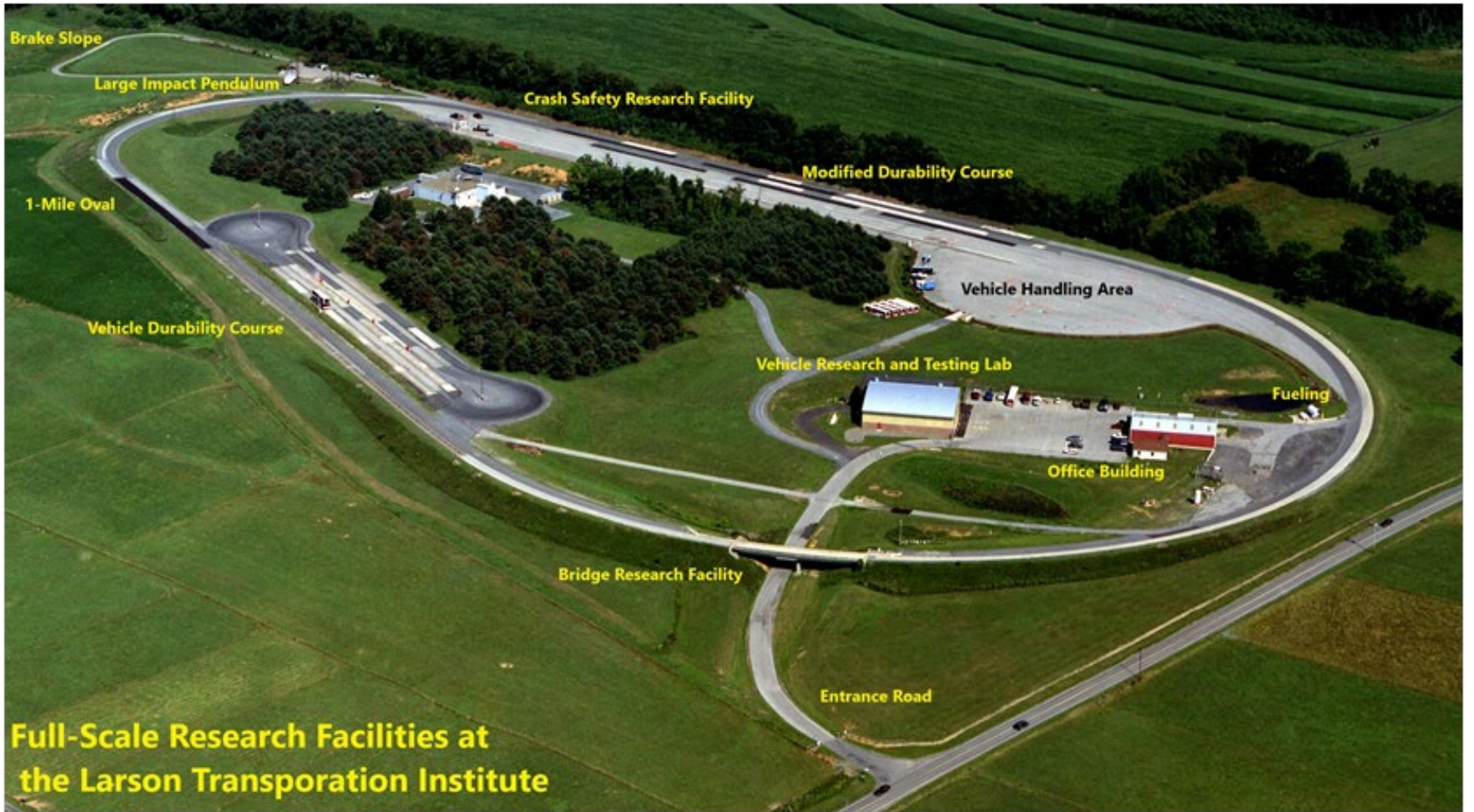
	HOUR	ACTION
Shift 1	midnight	D
	1:40 am	C
	1:50 am	B
	2:00 am	D
	3:35 am	C
	3:45 am	B
	4:05 am	D
	5:40 am	C
	5:50 am	B
	6:00 am	D
	7:40 am	C
	7:50 am	F
Shift 2	8:00 am	D
	9:40 am	C
	9:50 am	B
	10:00 am	D
	11:35 am	C
	11:45 am	B
	12:05 pm	D
	1:40 pm	C
	1:50 pm	B
	2:00 pm	D
	3:40 pm	C
	3:50 pm	F
Shift 3	4:00 pm	D
	5:40 pm	C
	5:50 pm	B
	6:00 pm	D
	7:40 pm	C
	7:50 pm	B
	8:05 pm	D
	9:40 pm	C
	9:50 pm	B
	10:00 pm	D
	11:40 pm	C
	11:50 pm	F

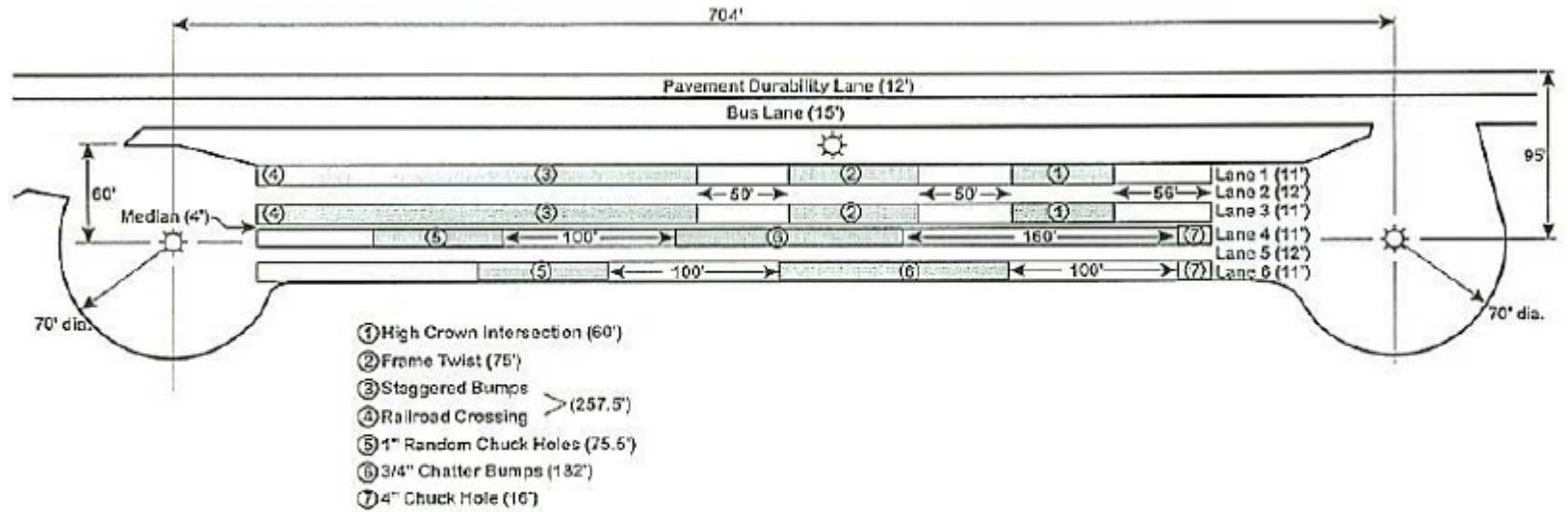
B—Break

C—Cycle all systems five times, visual inspection, driver's log entries

D—Drive bus as specified by procedure

F—Fuel bus, complete driver's log shift entries





Plan View

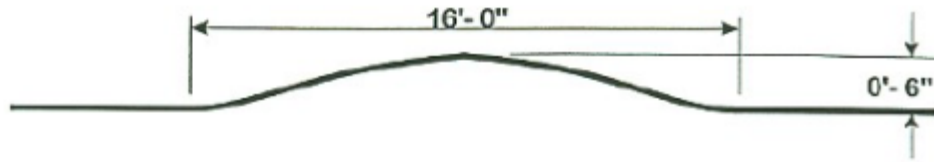
Vehicle Durability Test Track

Track 1 (Track 2 has similar layout)

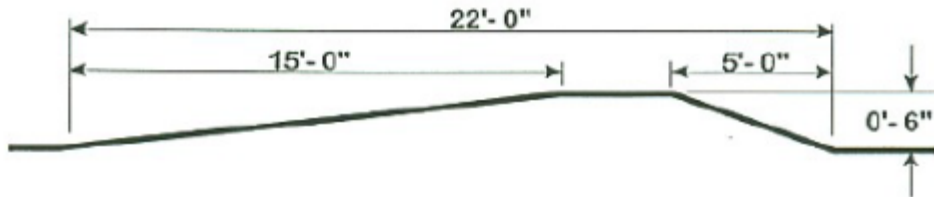
The Larson Transportation Institute

Penn State

Staggered
Bumps
(10 mph)



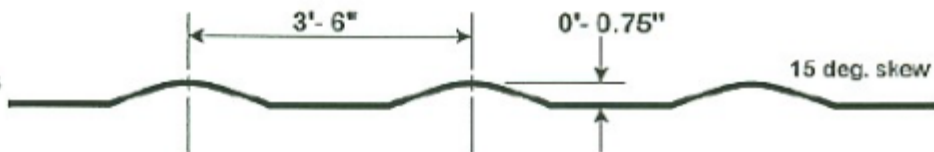
Railroad
Crossing
(8 mph)



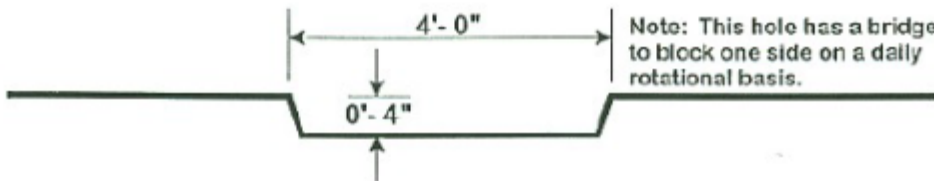
1" Random
Chuck Holes
(20 mph)



Chatter Bumps
(20 mph)

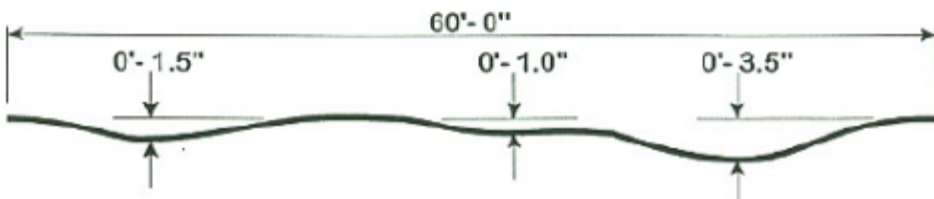


4" Chuck Hole
(5 mph)

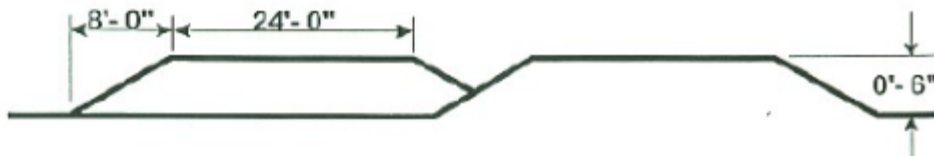


Note: This hole has a bridge to block one side on a daily rotational basis.

High Crown
Intersection
(20 mph)



Frame Twist
(10 mph)



Durability Element Profiles

The Larson Transportation Institute
Penn State

Unscheduled Maintenance
Endera Motors, LLC Bus #2024-01-P
 (Page 1 of 4)

Date	Test Miles	Issue	Action	Labor Hours	Sub-system	Class
02/08/24	233	Bus is leaking windshield washer fluid.	Windshield washer tank was loose and moving which caused the pump hose to disconnect. Reinstalled and secured hose s and tightened washer tank up.	0.50	Wiper and Washer	3
02/08/24	233	Exhaust tip is hitting on durability track. The last exhaust hanger on the streetside broke loose from weld.	Put exhaust pipe and exhaust hanger back in place and rewelded hanger to the round stock attached to the bus frame.	0.25	Exhaust	3
02/13/24	972	Last exhaust hanger on streetside by tailpipe is broken.	Loosened clamp, adjusted clamp, welded broken hanger on clamp.	0.25	Exhaust	3
02/19/24	2,037	Screws loose on second step at main entrance.	Tightened screws.	0.25	Interior	3
02/19/24	2,037	Screw and insert fell out of the floor to ceiling grab bar at the main passenger entry at the top.	Replaced the screw and insert.	0.25	Interior	3
02/19/24	2,037	Front center clearance light is not working.	Removed broken pins for electrical connector and crimped new terminal pins on wire. Re-installed back into connector and reconnected.	0.25	Body Lamp Assembly	3
02/19/24	2,037	P-clamp broken, screw out of another p-clamp and three screws fell out of barrier behind driver's seat.	Replaced broken p-clamp, replaced screw and nut on other p-clamp and reinstalled screws that fell out of barrier behind driver's seat.	0.25	Interior	3
02/19/24	2,037	Four missing screws by rear exit door on both sides. (Two streetside and two curbside)	Four missing screws were replaced.	0.25	Doors	3

Unscheduled Maintenance
Endera Motors, LLC Bus #2024-01-P
 (Page 2 of 4)

Date	Test Miles	Issue	Action	Labor Hours	Sub-system	Class
02/20/24	2,037	Trim piece and rain gutter came off of the top of entrance door. Screws (#8) are broken on entrance rain gutter.	Reinstalled trim piece and rain gutter with self-tapping screws. #8 screws were replaced with #10 screws.	0.25	Doors	3
02/20/24	2,037	Both rear shackles are worn.	Replaced both rear shackles.	0.50	Suspension	3
02/20/24	2,037	Four rivets missing on main entrance door surround.	Replaced the four missing rivets. Per manufacturer the original aluminum rivets were changed to steel.	0.25	Doors	3
02/23/24	3,409	Streetside rear leaf spring hitting rear coolant lines, wire and p-clip between spring and body cross members.	Removed p-clamps holding coolant hoses and wires. Per manufacturer rerouted coolant hoses on the inside of the frame and above fuel tank and secured the wires and hoses and topped off coolant	1.00	Electrical / HVAC	3
02/27/24	3,790	Interior panel above driver fell off.	Placed interior panel back into place and secured with screws.	0.25	Interior	3
02/29/24	4,561	Top and bottom p-clamps holding plexiglass barrier in place behind the driver's seat are broken.	Removed and replaced two p-clamps.	0.08	Interior	3
03/04/24	4,561	Weld on streetside motor mount is cracked.	Removed and replaced streetside motor mount to frame.	0.25	Chassis	3
03/07/24	4,561	Cracks found on Ford body where it attaches to the bus body on 02/29/24. One crack on the underside of body on streetside on a weld between the driver and passenger area and one crack on underside of body at the curbside above the catalytic converter and heat shield.	Per manufacturer, drilled the Ford body and bus body and riveted panels together.	2.00	Body	3

Unscheduled Maintenance
Endera Motors, LLC Bus #2024-01-P
 (Page 3 of 4)

Date	Test Miles	Issue	Action	Labor Hours	Sub-system	Class
03/19/24	5,299	Tread of second step fell out at passenger main entrance.	Replaced nutserts and the pan head screws that hold the tread in place.	0.25	Interior	1
03/19/24	5,299	Two exhaust hangers broke on the rear of the tailpipe.	Reinforced the weld on the back hanger. Replaced the broken hanger just up from the back one.	0.50	Exhaust	3
03/20/24	5,598	Curbside fender mounted mirror has a broken mounting screw.	Replaced screw, nut and washer.	0.50	Body Lamp Assembly	3
03/25/24	6,256	Panels above the passenger seats on the streetside of bus fell out.	Screws that hold the channel that holds the panel were broken. Drilled holes beside the broken screws and installed new screws. Reinstalled panels.	0.25	Interior	1
03/27/24	6,863	Top and bottom p-clamps holding plexiglass barrier in place behind the driver's seat are broken.	Removed and replaced two p-clamps.	0.08	Interior	3
03/28/24	6,863	Washer tank leaking.	Found broken mounting clip and that the hose wore through from rubbing on body. Replaced clip with a bolt, nut and washer, after cutting hose shorter and reinstalled hose.	1.00	Wiper and Washer	3
03/28/24	6,863	Barrier at entry steps has missing bolts.	Installed new bolts.	0.08	Interior	3
03/28/24	6,863	Rear panel near rear A/C unit is missing screws.	Installed new screws.	0.08	Interior	3

Unscheduled Maintenance
Endera Motors, LLC Bus #2024-01-P
 (Page 4 of 4)

Date	Test Miles	Issue	Action	Labor Hours	Sub-system	Class
04/02/24	7,517	Cracks found on bus from 02/29/24 through 04/02/24: #1 – Crack on underside of body at streetside where rivets were installed – this has cracked to the edge of the plate. #2 – Crack at curbside above catalytic converter where rivets were installed. #3 – Crack on core support on streetside. #4 – Crack found on backside of curbside front wheel well inner fender above frame rail. #5 – Crack on underside of body on the streetside under the rear bolt on driver's seat on side of frame rail. #6 – Crack in forward vertical beam where it is welded to square tube that is welded to entry step. #7 – Crack under body near where rivets were installed previously. #8 – Crack formed further to the rear of crack number 4. #9 – Two cracks next to each other on the streetside forward part of the inner fender above frame forward of the coil spring. #10 – Hood is cracked from hitting curbside mirror bracket. #11 – Curbside inner fender missing a piece and the spot weld broke loose where it attached to the rocker panel area.	Multiple cracks were welded/repaired.	4.00	Body/Frame	3
04/03/24	7,517	Front sway bar at streetside has shifted toward the curbside and damaged the saddle and bushing.	A new sway bar, bushings and streetside saddle clamp were installed.	0.50	Suspension	3

UNSCHEDULED MAINTENANCE



**HOSE CAME OFF OF WINDSHIELD WASHER FLUID PUMP
(233 TEST MILES)**



**EXHAUST HANGER WELDED BACK INTO PLACE
(233 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.

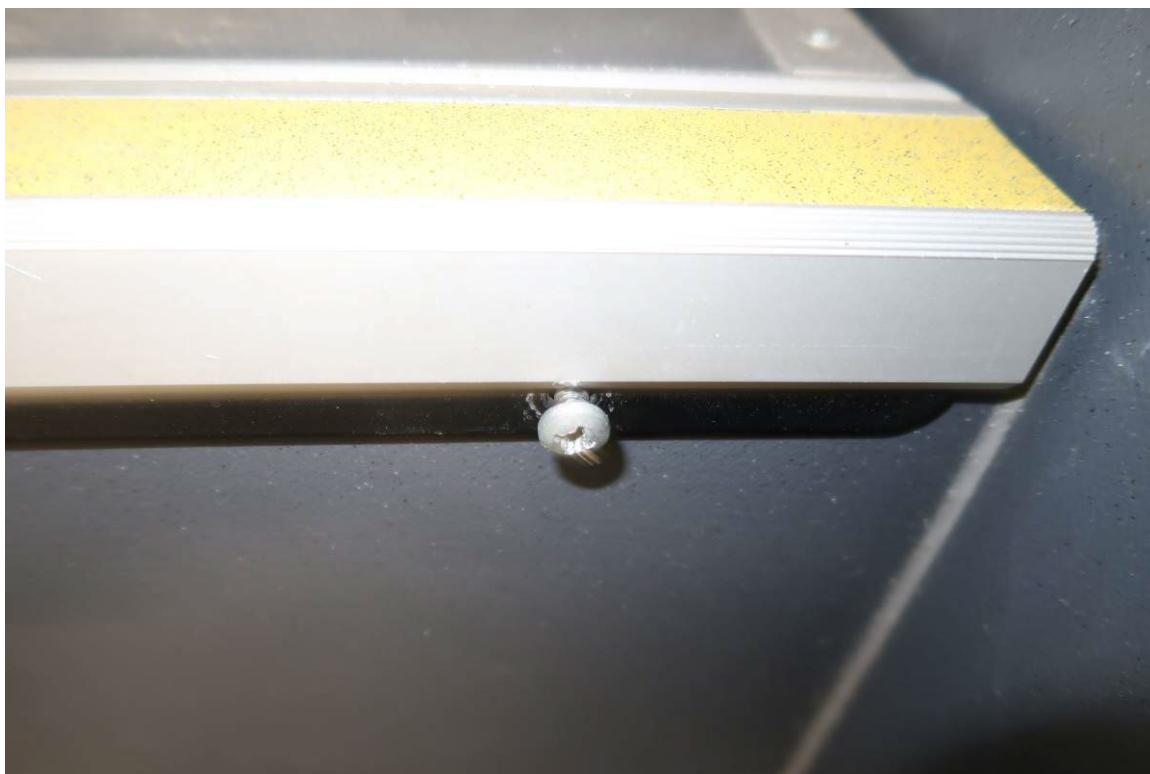


**BROKEN EXHAUST HANGER BRACKET
(972 TEST MILES)**



**BOLT MISSING AT TOP OF GRAB BAR AT PASSENGER ENTRANCE
(2,037 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**LOOSE SCREW ON SECOND STEP AT MAIN PASSENGER ENTRANCE
(2,037 TEST MILES)**



**SCREWS MISSING BY REAR EXIT DOOR
(2,037 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**NEW SCREWS IN RAIN GUTTER ABOVE PASSENGER ENTRANCE
(2,037 TEST MILES)**



**NEW AND OLD REAR SHACKLES
(2,037 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.

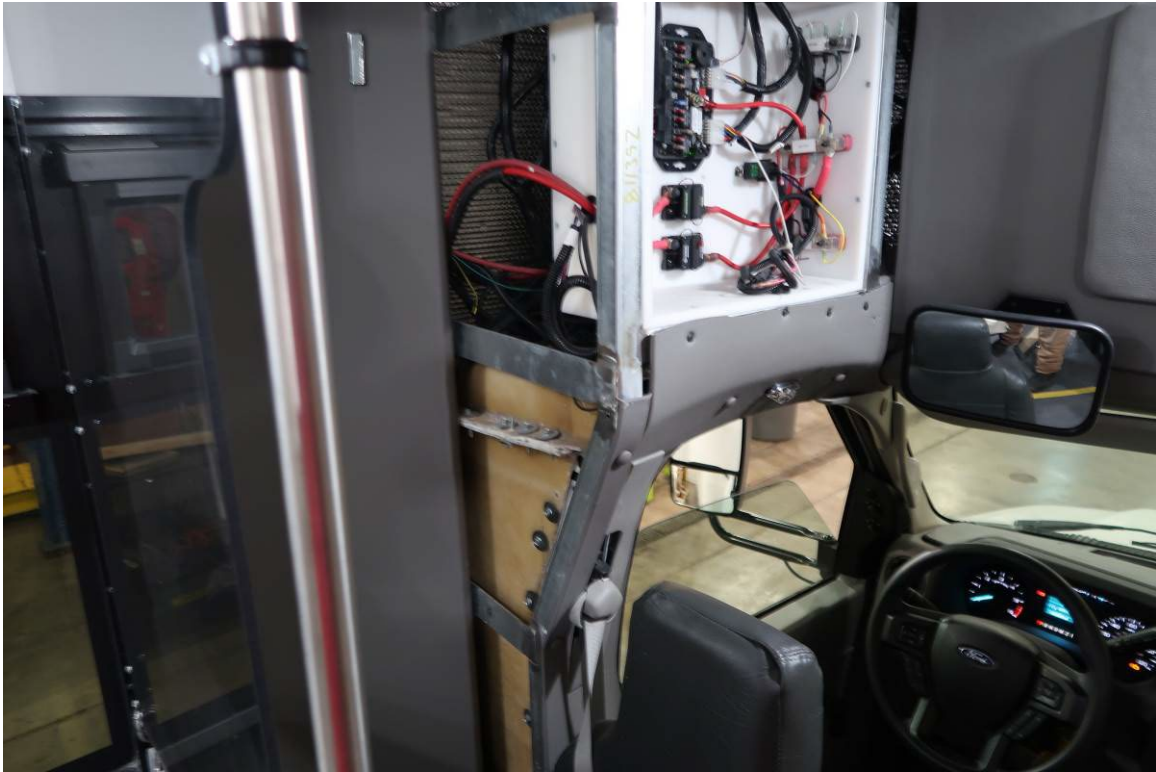


**STEEL RIVETS INSTALLED IN MAIN PASSENGER
ENTRANCE DOOR SURROUND
(2,037 TEST MILES)**



**STREETSIDE REAR LEAF SPRING HITTING COOLANT LINES AND WIRES
(3,409 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**INTERIOR PANEL ABOVE DRIVER FELL OFF
(3,790 TEST MILES)**



**CRACKED WELD ON STREETSIDE MOTOR MOUNT
(4,561 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.

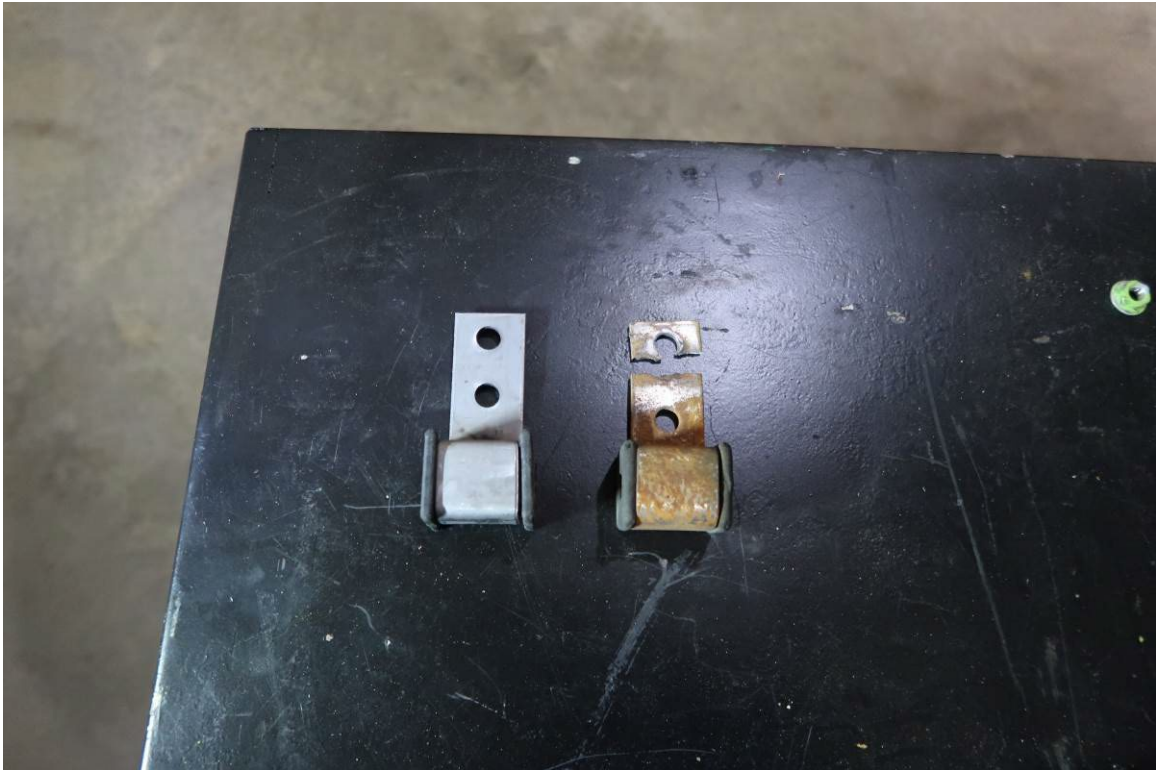


**CRACKS ON FORD BODY WHERE IT ATTACHES TO BUS BODY
(4,561 TEST MILES)**



**NUTSERTS REPLACED ON SECOND STEP AT
MAIN PASSENGER ENTRANCE
(5,299 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**NEW AND BROKEN EXHAUST HANGERS
(5,299 TEST MILES)**



**BROKEN MOUNTING SCREW ON
CURBSIDE FENDER MIRROR
(5,598 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**PANELS ABOVE PASSENGER SEATS FELL
(6,256 TEST MILES)**



**WINDSHIELD WASHER TANK HOSE WORN THROUGH
(6,863 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**SCREWS REPLACED IN BARRIER
AT PASSENGER ENTRY STEPS
(6,863 TEST MILES)**

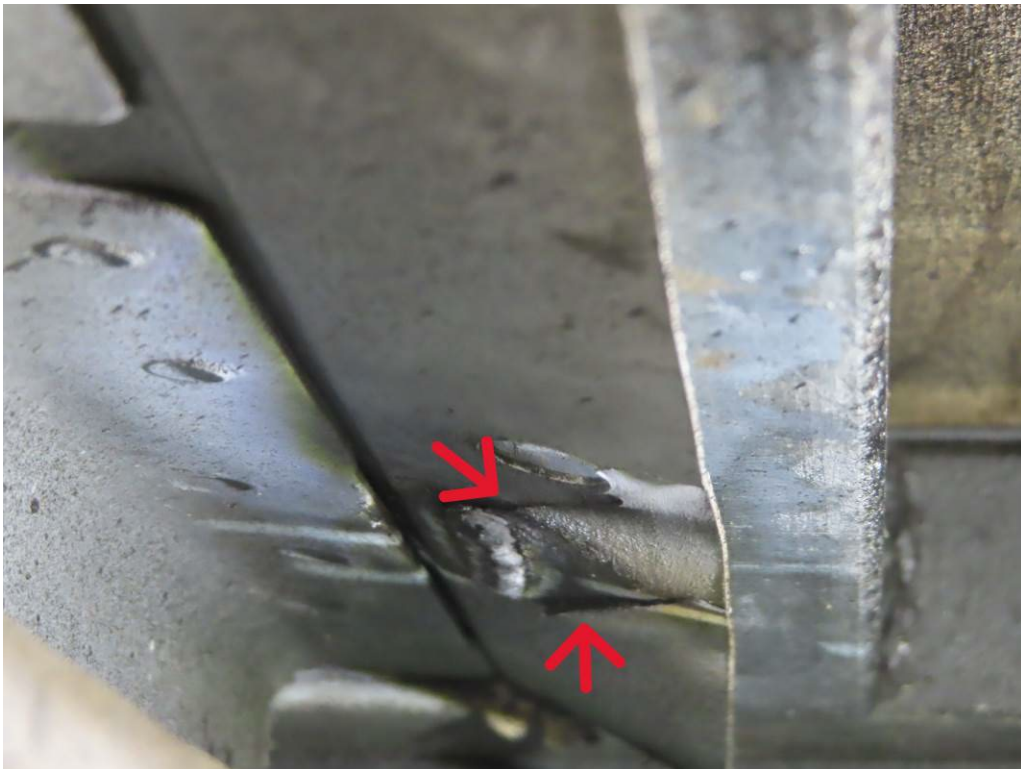


**SCREWS REPLACED IN REAR PANEL NEAR A/C UNIT
(6,863 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**CRACK ON UNDERSIDE OF BODY WHERE RIVETS WERE INSTALLED
(4,561 TEST MILES)**



**CRACK AT CURBSIDE ABOVE CATALYTIC CONVERTER
WHERE RIVETS WERE INSTALLED
(5,598 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**CRACK ON CORE SUPPORT ON STREETSIDE
(5,598 TEST MILES)**

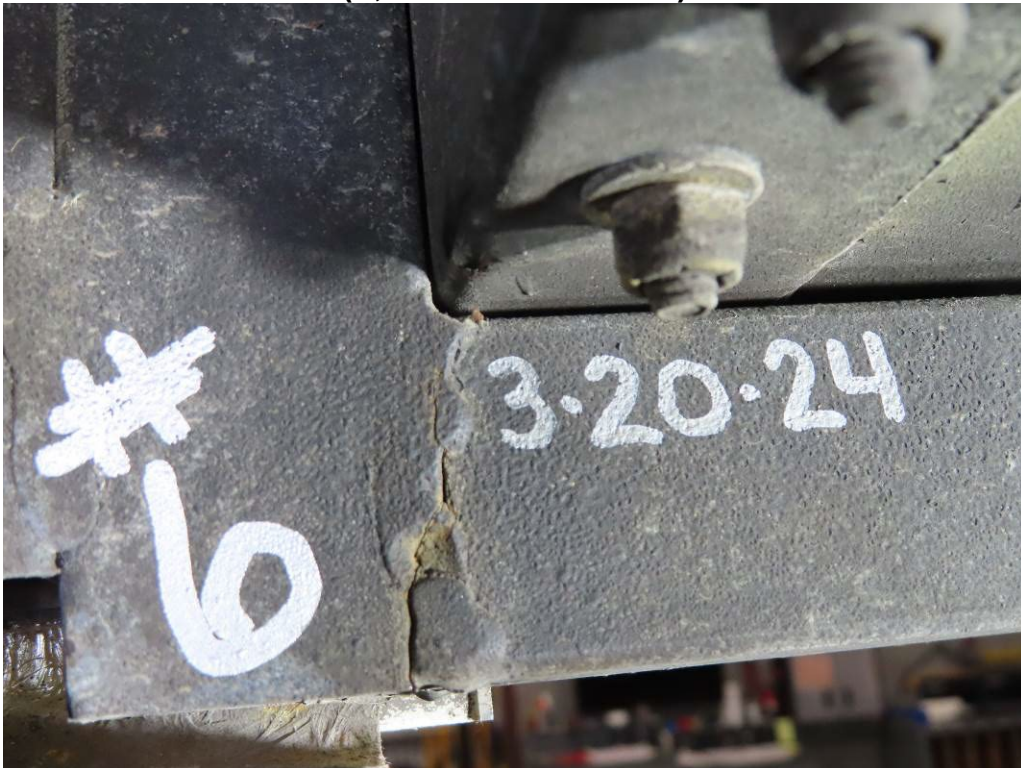


**CRACKS ON BACKSIDE OF CURBSIDE FRONT
WHEEL WELL INNER FENDER ABOVE FRAME RAIL
(7,517 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.

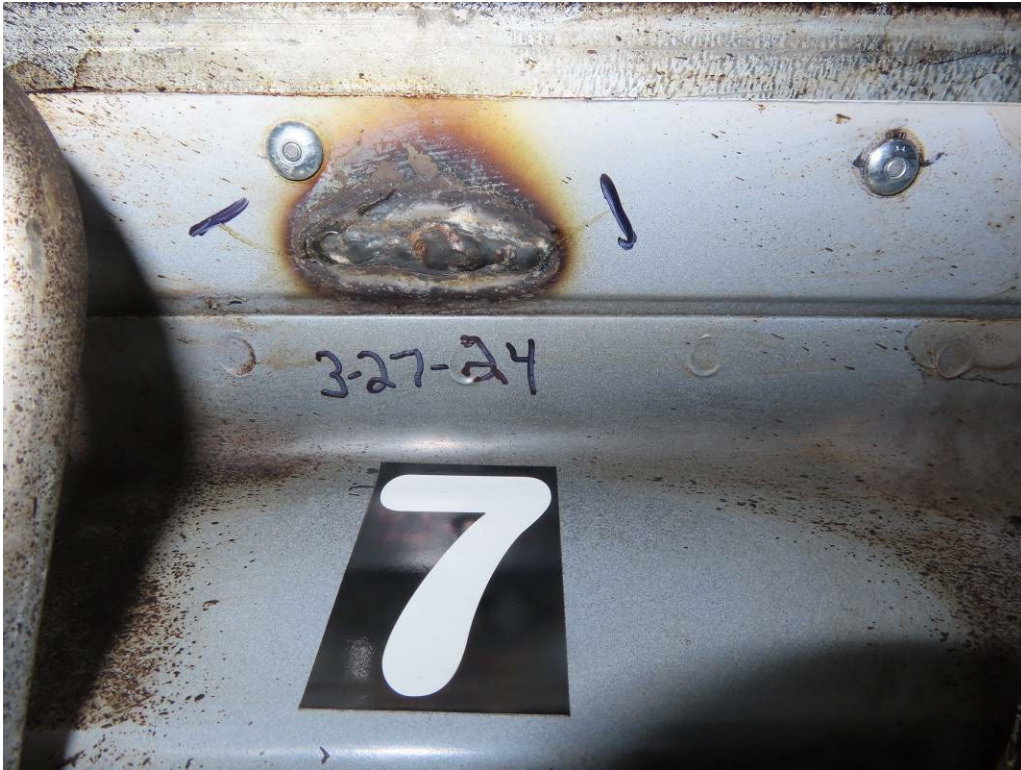


**CRACK ON UNDERSIDE OF BODY UNDER
REAR BOLT ON DRIVER'S SEAT
(5,598 TEST MILES)**



**CRACK IN FORWARD VERTICAL BEAM WHERE WELDED TO SQUARE TUBE
THAT IS WELDED TO ENTRY STEP
(5,598 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**CRACK ON UNDERSIDE OF BODY WHERE RIVETS WERE INSTALLED
(6,863 TEST MILES)**



**CRACKS ON STREETSIDE FORWARD PART OF INNER FENDER
ABOVE FRAME FORWARD OF COIL SPRING
(7,517 TEST MILES)**

UNSCHEDULED MAINTENANCE CONT.



**CRACK ON HOOD WHERE MIRROR BRACKET IS HITTING
(7,517 TEST MILES)**



**PIECE MISSING AND CRACK ON CURBSIDE INNER FENDER
(7,517 TEST MILES)**

7. NOISE

7.1 INTERIOR NOISE AND VIBRATION TESTS

7.1-I. TEST OBJECTIVE

The objective of these tests is to measure and record interior noise levels and check for audible vibration under various operating conditions.

7.1-II. TEST DESCRIPTION

During this series of tests, the interior noise level was measured at several locations with the bus operating under the following three conditions:

1. With the bus stationary, a white noise generating system provided a uniform sound pressure level equal to 80 dB(A) on the left, exterior side of the bus. The engine and all accessories were switched off and all openings including doors and windows were closed. This test was performed at the LTI Test Track Facility.
2. The bus was accelerated at full throttle from a standing start to 35 mph on a level pavement. All openings were closed and all accessories were operating during the test. This test was performed on the track at the LTI Test Track Facility.
3. The bus was operated at various speeds from 0 to 55 mph with and without the air conditioning and accessories on. Any audible vibration or rattles were noted. This test was performed on the test segment between the LTI Test Track and the Bus Testing Center.

All tests were performed in an area free from extraneous sound-making sources or reflecting surfaces. The ambient sound level as well as the surrounding weather conditions were recorded in the test data.

7.1-III. DISCUSSION

For the first part, the overall average of the six measurements was 47.2 dB(A); ranging from 46.3 dB(A) in line with the rear speaker to 47.6 dB(A) at the driver's seat and in line with the front and middle speakers. The interior ambient noise level for this test was less than 30 dB(A).

For the second part, the interior noise level ranged from 73.7 dB(A) at the rear passenger seats to 75.1 dB(A) at the driver's seat. The overall average was 74.3 dB(A). The interior ambient noise level for this test was less than 30 dB(A).

No vibrations or rattles were noted during the third part of this test.

INTERIOR NOISE TEST DATA FORM

Test Condition 1: 80 dB(A) Stationary White Noise

Page 1 of 3

Bus Number: 2024-01-P	Date: 03/22/24
Personnel: F.T., S.R., T.G. & R.M.	
Temperature (°F): 44	Humidity (%): 42
Wind Speed (mph): 11	Wind Direction: NW
Barometric Pressure (inHg): 30.19	
Interior Ambient Noise Level dB(A): Less than 30	Exterior Ambient Noise Level dB(A): 40.4
Microphone Height During Testing (in): 47.2	

Reading Location	Measured Sound Level dB(A)
Driver's Seat	47.6
Front Passenger Seats	47.0
In Line with Front Speaker	47.6
In Line with Middle Speaker	47.6
In Line with Rear Speaker	46.3
Rear Passenger Seats	46.8

Comments: None noted.

INTERIOR NOISE TEST DATA FORM
Test Condition 2: 0 to 35 mph Acceleration Test
Page 2 of 3

Bus Number: 2024-01-P	Date: 02/22/24
Personnel: F.T., R.M. & J.S.	
Temperature (°F): 34	Humidity (%): 80
Wind Speed (mph): 4	Wind Direction: SE
Barometric Pressure (mbar): 972	
Interior Ambient Noise Level dB(A): Less than 30	Exterior Ambient Noise Level dB(A): 44.6
Microphone Height During Testing (in): 47.8	

Reading Location	Measured Sound Level dB(A)
Driver's Seat	75.1
Front Passenger Seats	74.4
Middle Passenger Seats	73.8
Rear Passenger Seats	73.7

Comments: None noted.

INTERIOR NOISE TEST DATA FORM
Test Condition 3: Audible Vibration Test

Page 3 of 3

Bus Number: 2024-01-P	Date: 02/22/24
Personnel: F.T., R.M. & J.S.	
Temperature (°F): 38	

Describe the following possible sources of noise and give the relative location on the bus.

Source of Noise	Location	Description of Noise
Engine and Accessories	N/A	None noted.
Windows and Doors	N/A	None noted.
Seats and Wheelchair lifts	N/A	None noted.
Other	N/A	None noted.

Comment on any other vibration or noise source which may have occurred
that is not described above: None noted.
Comments: None noted.

7.1 INTERIOR NOISE TEST



**TEST BUS SET-UP FOR 80 dB(A)
INTERIOR NOISE TEST**



ENDERA LEGACY SHUTTLE

Experience the future of urban transportation with Endera's Legacy Shuttle Buses. Designed for safety, durability, and performance, these buses redefine the commuting experience. Built and completed in Endera's Ohio manufacturing plant, with a focus on safety and efficiency, this bus is equipped with a range of features to ensure passenger well-being and operator peace of mind.

- **Unrivaled Safety:** Fully welded steel framework, high-quality exterior materials, and advanced safety features ensure maximum passenger protection.
- **Durability Redefined:** Designed to withstand the rigors of urban transit, the Legacy Shuttle Bus boasts a robust construction and premium components for long-lasting performance.
- **Efficiency at its Core:** Engineered for efficiency, Endera Legacy Shuttle Buses offer optimal fuel economy without compromising on power or performance.



SPECIFICATIONS

Vehicle Name	B23	B25	B28
Length	23 ft	25 ft	28 ft
Wheelbase	158 in	176 in	212 in
Chassis	Ford E350/ E450	Ford E450	Ford E450
Engine	7.3L Gas	7.3L Gas	7.3L Gas
GVWR	12,500 lbs	14,500 lbs	14,500 lbs
Passenger Capacity	18 / 20	22	24
Overall Width	96"	96"	96"
Overall Height	116"	116"	116"
Ground to Interior Floor	30"	30"	30"
Ground to 1st Step	11.50"	11.50"	11.50"
Step Riser	9"	9"	9"
Step Tread	12"	12"	12"
Step Width	35.50"	35.50"	35.50"
Entry Door Clear Opening	33"	33"	33"

STANDARD FEATURES

Exterior:

White Exterior Gel Coat Finish
Fully Welded 1.5" x 1.5" Tubular Steel Roll Cage Framework
High Gloss Fiberglass Exterior Wall Material
Electric Powered 36" Entrance Door with Dash Switch (33" Clear Opening)
Rosco Exterior Manual Mirrors
Rear Mud Flaps
Steel Rear Bumper
Rear Wheel Rubber Fender Guard

Windows and Doors:

36" x 36" Clamp Ring Windows
One Egress/Push Out Window Per Side
Color Coded Wiring
Door Activated Interior Lights

Decals and Accessories:

"Endera" Basic Decal Kit
Emergency Triangles

Interior:

5/8" Exterior Grade Plywood Floor
Coved Flooring
Track Seating
Stanchion at Top of Step Well w/ Modesty Panel & Hand Rail Parallel to Steps (Left Side)
Right Hand Grab Rail Parallel to Steps
Black Interior Sidewalls
White Interior Ceiling
Gray Padded Vinyl In Driver's Area
Interior LED Lighting Package
Overhead Storage Compartment in Front Bulkhead
4 Interior Speakers (2 in Front and 2 in Rear)
Additional Curbside Leaf Spring on Lift Buses

Electrical System:

Intermotive Flextech Programmable Electrical System
Exterior LED Lighting Package

Warranty and Certification:


FORD OEM STANDARD CHASSIS FEATURES:

Chassis Daytime Running Lights
OEM 240 Amp HD Alternator
Cruise Control
CNG Engine Prep Package

ENDERA AUTOMOTIVE WARRANTY FEATURES:

3 Year / 36,000 Mile Warranty - (OEM Only)
5 Year / 100,000 Mile Warranty - (Endera Structure Only)
STURRA Tested for 7 years / 200,000 Miles
FMVSS Certified

Note: Specifications subject to change. Contact Endera for the most up-to-date information and customization options.

STANDARD OPERATING PROCEDURE						
	Title	Leak Test Procedure				
	Department	Quality		Creation Date		6/3/2022
	SOP No.	SOP-QLT-0004		Rev #	1	Rev Date 6/3/2022
Approvals		Name	Signature	Date		
Prepared by:		Brian Buss				
Approved by:						

JOB INSTRUCTIONS

1. Purpose

- 1.1 To define the process of performing leak test on completed vehicles

2. Responsibilities

- 2.1 Manufacturing management is responsible to assign the proper qualified employees to perform leak testing
- 2.2 The inspector is responsible for conducting the leak test and properly completing the inspection forms
- 2.3 The Quality department is responsible for the oversight and management of the leak test process

3. Leak test

3.1 Use the proper form for the vehicle being tested

- 3.1.1 F-QLT-0013 for 4 section school bus
- 3.1.2 F-QLT-0014 for 5 section school bus
- 3.1.3 F-QLT-0015 for 6 section school bus
- 3.1.4 F-QLT-0018 for 24' commercial bus
- 3.1.5 F-QLT-0019 for 28' commercial bus

3.2 Enter the job #, VIN #, date, and name on the form

3.3 Circle yes/no if the vehicle has a wheel chair lift

3.4 Ensure all doors, windows, hatches etc. are closed

3.5 Perform the leak test

- 3.5.1 Turn on the water valve
- 3.5.2 Verify that water is spraying
- 3.5.3 Back the bus into the spray booth
- 3.5.4 Using a light, inspect all interior areas for leaks
- 3.5.5 Identify any leaks on the inspection form by circling the area
- 3.5.6 If more than one leak is found, number the circles, starting with 1
- 3.5.7 Allow the system to spray for 20 minutes
- 3.5.8 Drive the bus out of the booth
- 3.5.9 Shut off the water valve

- 3.6 If no leaks are found, file the completed form with the job traveler
- 3.7 On the back of the form, check the appropriate box under "Test Results"
- 3.8 Investigate the root cause of any leak(s) and repair as necessary
- 3.9 On the back of the form, enter the leak # and the corrective action taken by describing the repair
- 3.10 Notify the line manger if assistance is needed to make the proper repairs
- 3.11 After repairs are completed, perform another leak test starting with 3.5 above
- 3.12 Repeat the process until no leaks are identified
- 3.13 When the vehicle passes inspection, the inspector files the completed form with the traveler
- 3.14 The inspector notifies the line manager that the bus has passed inspection

Station #15

5/28/2024

Assembler #1	Assembler #2
Perform a Leak Test on the Entire Bus	Task
Take the bus to the shower area Turn the water on to the shower header	Additional Instructions





Station #
5/28/2024

Assembler #1	Assembler #2
Task	Task
Material Required	Material Required

Station

5/28/2024

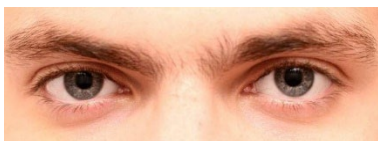
Assembler #1	Assembler #2
Back the bus under the shower header so the entire body is being sprayed	Task
Wait 20 minutes while the water rains onto the bus	Additional Instructions



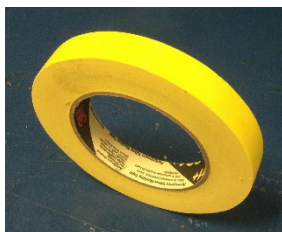
Assembler #1	Assembler #2
Task	Task
Material Required	Material Required



Light

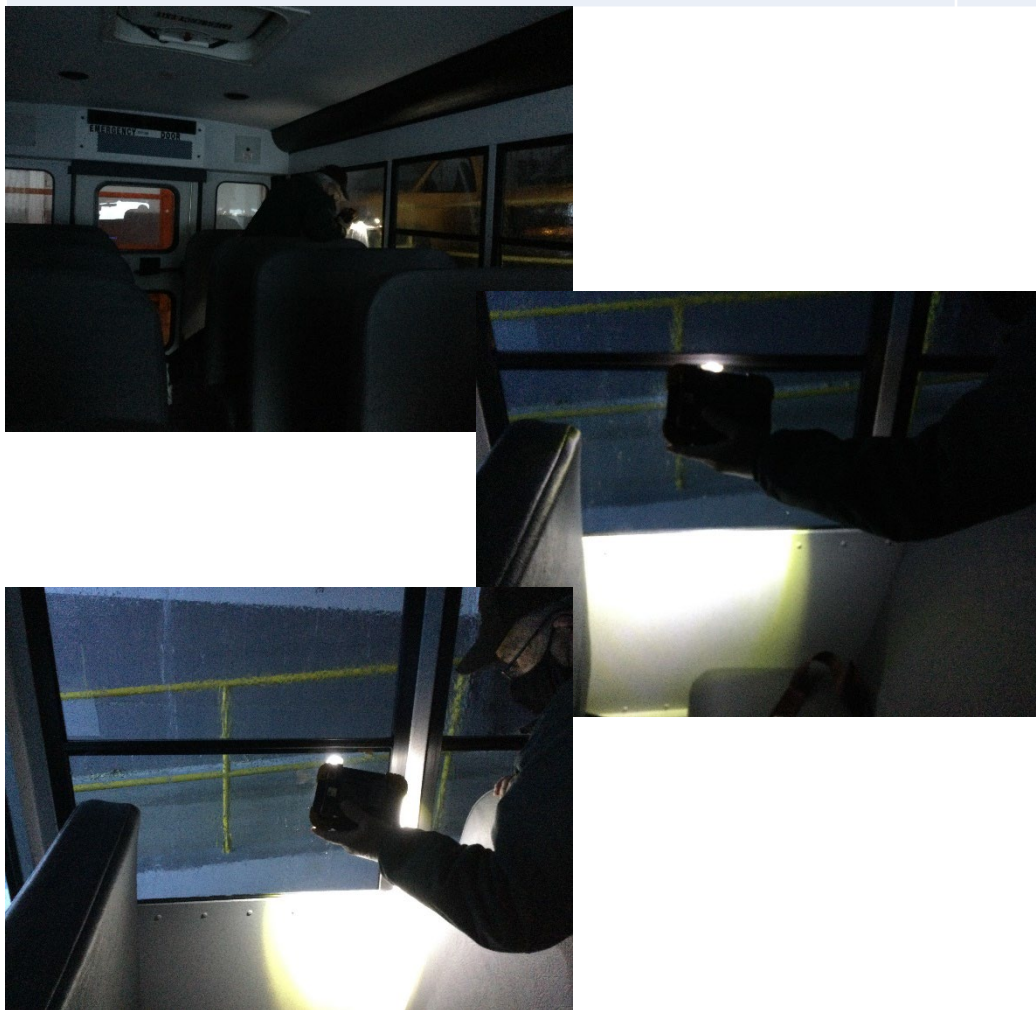


Eyes



Masking Tape

Assembler #1	Assembler #2
Move around the inside of the bus looking for water	Task
Check the windows and the ceiling, mark any leaks with masking tape	Additional Instructions

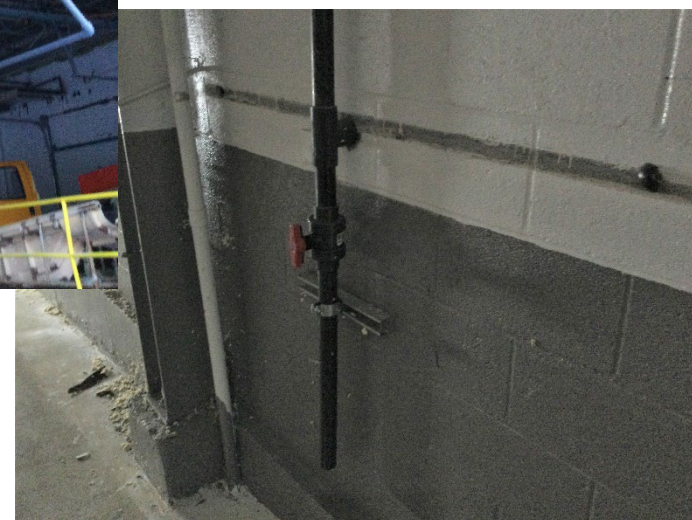




Station #
5/28/2024

Assembler #1	Assembler #2
Task	Task
Material Required	Material Required

Assembler #1	Assembler #2
Pull the bus out of the shower	Task
Turn the shower off and drain the plumbing by opening the drain leg valve	Additional Instructions

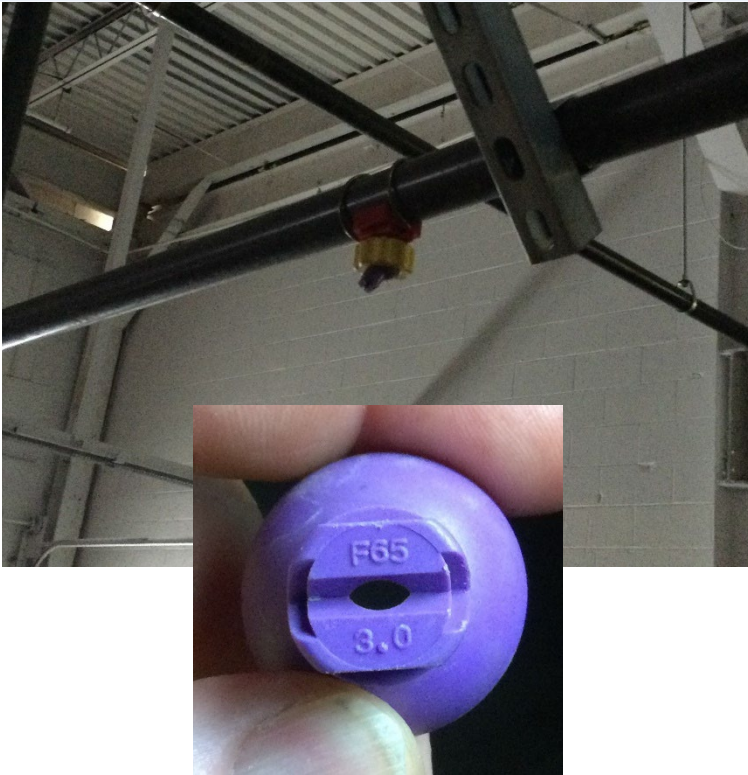




Station #
5/28/2024

Assembler #1	Assembler #2
Task	Task
Material Required	Material Required

Assembler #1	Assembler #2
22 Nozzles are rated for 3 gpm @ 40 psi and 65 degree spray angle, 30" away from the bus	Task
The actual flow and pressure are 1.7 gpm @ 12 psi each	Additional Instructions



2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330



Client Proposal

Prepared by:

Mark Prohaska

Office: 641-923-2855

Quote ID: End158Air

Date: 10/25/2022



Pritchard Commercial Sales | 1400 South 24th Street Suite B, Clear Lake, Iowa, 50428

Office: 641-923-2855



Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle

Code	Description
Base Vehicle	
E4F	Base Vehicle Price (E4F)
Packages	
782A	<p>Order Code 782A</p> <p><i>Includes:</i></p> <ul style="list-style-type: none">- Engine: 7.3L V8 Premium-Rated- Transmission: 6-Speed O/D w/Tow Haul- Includes auxiliary cooler.- 4.56 Axle Ratio- GVWR: 14,500 lb Payload Package- Tires: LT225/75R16E BSW A/S- Hankook DynaPro HT.- Wheels: 16" x 6" White Painted Steel- Radio: AM/FM Stereo w/Clock Display & 2 Speakers- Includes Bluetooth capability and USB input.- Auxiliary Fuel Port <p>Located on the fuel tank, offers entry point access to fuel tank for specialized gas powered equipment such as a power generator, powered wheelchair lift, etc.</p>
Powertrain	
99N	Engine: 7.3L V8 Premium-Rated
44P	Transmission: 6-Speed O/D w/Tow Haul
	<i>Includes auxiliary cooler.</i>
X83	4.56 Axle Ratio
20F	GVWR: 14,500 lb Payload Package
Wheels & Tires	
T68	Tires: LT225/75R16E BSW A/S
	<i>Hankook DynaPro HT.</i>
646	Wheels: 16" x 6" White Painted Steel
Seats & Seat Trim	
21T	Captain's Chair Driver Side Only
	<i>Includes:</i>
	<ul style="list-style-type: none">- Cloth Captain's Chairs- Passenger Side Air Bag Delete
M	Cloth Captain's Chairs

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle (cont'd)

Code	Description
Other Options	
L23	Raw Material Surcharge
PAINT	Monotone Paint Application
158WB	158" Wheelbase
153	License Plate Bracket
60X	Right Hand Door Delete <i>Deletes passenger side A-pillar grab handle, right hand seat belt system and hardware, passenger side air bag, under-seat stowage, passenger side sun visor, passenger side speaker and headliner.</i> <i>Includes:</i> <i>- Exterior Mirror Delete</i>
625	Day/Night Interior Rearview Mirror
525	Cruise Control
41H	Engine Block Heater <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i>
587	Radio: AM/FM Stereo w/Clock Display & 2 Speakers <i>Includes Bluetooth capability and USB input.</i>
559	Frame Pucks (Isolators) <i>Includes 12 body mounts.</i>
47Z	Ambulance Prep Package Not Required Required on orders not destined for ambulance use.
18A	High Series Exterior Upgrade Package <i>Includes:</i> <i>- Front Chrome Bumper</i> <i>- Chrome Grille</i>
47B	Shuttle Bus Prep Package <i>Includes:</i> <i>- High Series Exterior Upgrade Package</i> <i>- Front Chrome Bumper</i> <i>- Chrome Grille</i> <i>- Engine Block Heater</i> <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i> <i>- Frame Pucks (Isolators)</i> <i>Includes 12 body mounts.</i> <i>- License Plate Bracket</i> <i>- Front Headliner Delete</i>

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Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle (cont'd)

Code	Description
	- Front Dome Lamp Delete
54F	Exterior Mirror Delete
162	Vinyl Floor Covering

Fleet Options

57J	Auxiliary Heater Connection Package Requires valid FIN code. <i>Includes rear fan controls.</i>
942	Non-Configurable Daytime Running Lamps Requires valid FIN code.
672	Maximum Front GAWR: 5000 lbs. Requires valid FIN code.
FLADCR	Fleet Advertising Credit
WARANT	Fleet Customer Powertrain Limited Warranty Requires valid FIN code. <i>Ford is increasing the 5-year 60,000-mile limited powertrain warranty to 5-years, 100,000 miles. Only Fleet purchasers with a valid Fleet Identification Number (FIN code) will receive the extended warranty. When the sale is entered into the sales reporting system with a sales type fleet along with a valid FIN code, the warranty extension will automatically be added to the vehicle. The extension will stay with the vehicle even if it is subsequently sold to a non-fleet customer before the expiration. This extension applies to both gas and diesel powertrains. Dealers can check for the warranty extension on eligible fleet vehicles in OASIS. Please refer to the Warranty and Policy Manual section 3.13.00 Gas Engine Commercial Warranty. This change will also be reflected in the printed Warranty Guided distributed with the purchase of every new vehicle.</i>

Emissions

425	50 State Emission System
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Exterior Color

YZ_02	Oxford White
-------	--------------

Interior Color

ME_01	Medium Flint w/Cloth Captain's Chairs
-------	---------------------------------------

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Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs

Dimensions

- Conventional Capacity: 7,500 lbs.
- Vehicle body length: 261"
- Vehicle body height: 80"
- Front track: 69"
- Vehicle turning radius: 27'
- Axle to end of frame: 69"
- Frame yield strength (psi): 36000
- Front brake diameter: 13.6"
- Headroom first-row: 42.0"
- Shoulder room first-row: 68.1"
- GCWR: 22,000 lbs.
- Vehicle body width: 79"
- Wheelbase: 158"
- Rear track: 78"
- Cab to axle: 100"
- Frame section modulus: 6 cu.in.
- Front bumper to back of cab: 92"
- Rear brake diameter: 13.6"
- Leg room first-row: 42.1"
- Hip room first-row: 65.6"

Powertrain

- 7.3L V-8 variable valve control, engine with 325HP
- Injection Type: sequential MPI
- Horsepower: 325 HP@3750 RPM
- * **Engine block heater**
- TorqShift 6-speed automatic
- Recommended fuel: regular unleaded
- Engine cylinders: V-8
- Spark ignition system
- Torque: 450 lb.-ft.@3750 RPM
- Radiator
- Rear-wheel drive
- All-speed ABS and driveline traction control

Fuel Economy and Emissions

- Gasoline secondary fuel type
- Federal emissions

Suspension and Handling

- Standard ride suspension
- Heavy-duty rear shock absorbers
- Heavy-duty front shock absorbers

Driveability

- 4-wheel disc brakes
- 4-wheel antilock (ABS) brakes
- Hill start assist
- Front anti-roll bar
- Rigid axle rear suspension
- Rear anti-roll bar
- Re-circulating ball steering
- Front ventilated disc brakes
- Three channel ABS brakes
- Independent front suspension
- Front coil springs
- Leaf spring rear suspension
- Hydraulic power-assist steering system
- 2-wheel steering system

Body Exterior

- * **1 door**
- Monotone paint
- Black windshield trim
- Clearcoat paint
- Black side window trim
- Black door handles

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Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

- * **Chrome front bumper**
- * **Chrome grille**
- 16 x 6-inch front and dual rear painted steel wheels
- Black front bumper rub strip
- LT225/75RS16 AS BSW front and rear tires

Convenience

- Manual door locks
- * **Day/Night rearview mirror**
- Engine cover console
- Standard glove box
- Driver and passenger door bins
- * **Cruise control with steering wheel mounted controls**
- Manual first-row windows
- Additional console storage
- Front beverage holders
- PRND in IP

Comfort

- Manual climate control
- Front vinyl floor covering
- Manual tilting steering wheel
- Urethane steering wheel
- * **Auxiliary rear heater provision**
- Front floor coverage
- Manual telescopic steering wheel

Seats and Trim

- * **Seating capacity: 1**
- * **Captain front seats**
- Fixed front seat head restraints
- Manual reclining driver seat
- * **Cloth front seat upholstery**
- * **Driver bucket seat**
- Driver seat with 4-way directional controls
- Driver seat armrest
- Manual driver seat fore/aft control

Entertainment Features

- AM/FM stereo radio
- External memory control
- Standard grade speakers
- Fixed audio antenna
- Seek scan
- * **Speakers number: 1**
- Bluetooth wireless audio streaming

Lighting, Visibility and Instrumentation

- Analog instrumentation display
- In-radio display clock
- Oil pressure gauge
- Voltmeter
- Aero-composite headlights
- Auto on/off headlight control
- Variable intermittent front windshield wipers
- Variable instrument panel light
- Trip odometer
- Tachometer
- Engine/electric motor temperature gauge
- Light tinted windows
- Halogen headlights
- Multiple enclosed headlights
- Sun visor strip
- Daytime running lights

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Technology and Telematics

- Bluetooth handsfree wireless device connectivity
- 2 USB ports
- FordPass Connect 4G mobile hotspot internet access

Safety and Security

- Driver front impact airbag
- Front height adjustable seatbelts
- * **1 seatbelt pre-tensioner**
- Electronic stability control system
- * **1 airbag**
- Front seatbelt pretensioners
- Fleet Telematics Modem vehicle tracker

Dimensions

General Weights

* Curb weight	5,446 lbs.	* Rear curb weight	2,419 lbs.
GVWR	14,500 lbs.	Payload	8,980 lbs.

Trailing Weights

Conventional capacity	7,500 lbs.	GCWR	22,000 lbs.
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Front Weights

* Front curb weight	3,027 lbs.	GAWR front	5,000 lbs.
Axle capacity front	5,000 lbs.	Spring rating front	5,000 lbs.
Tire/wheel capacity front	5,000 lbs.		

Rear Weights

GAWR rear	9,600 lbs.	Axle capacity rear	9,600 lbs.
Spring rating rear	9,600 lbs.	Tire/wheel capacity rear	9,880 lbs.

Off Road

Loading floor height	26.0 "
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Exterior Measurements

Vehicle body length	261"	Vehicle body width	79"
Vehicle body height	80"	Wheelbase	158"
Front brake diameter	13.6"	Rear brake diameter	13.6"
Rear frame height loaded	26"	Front track	69"
Rear track	78"	Vehicle turning radius	27'
Cab to axle	100"	Axle to end of frame	69"
Frame section modulus	6 cu.in.	Frame yield strength (psi)	36000
Front bumper to back of cab	92"		

Headroom

Headroom first-row	42.0"
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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Legroom

Leg room first-row 42.1"

Shoulder Room

Shoulder room first-row 68.1"

Hip Room

Hip room first-row 65.6"

Powertrain

Engine

Engine 7.3L V-8 variable valve control, engine with 325HP

Engine cylinders V-8

Engine location Front mounted engine

Engine mounting direction Longitudinal mounted engine

Cylinder head material Aluminum cylinder head

Valves per cylinder 2

Injection type sequential MPI

Ignition Spark ignition system

Engine block material Iron engine block

Engine Specs

Displacement 7.3L

Bore 4.21"

Compression ratio 10.5

cc 445 cu.in.

Stroke 3.98"

SAEJ1349 AUG2004 compliant

Engine Power

Horsepower 325 HP@3750 RPM

Torque 450 lb.-ft. @3750 RPM

Alternator

Alternator amps 210A

Alternator type Heavy-duty alternator

Battery

Battery amps 78Ah

Battery rating 750CCA

Battery type HD lead acid battery

Engine Extras

* **Block heater** **Engine block heater**

Radiator Radiator

Transmission

Transmission TorqShift 6-speed automatic

Transmission electronic control Transmission electronic control

Overdrive transmission Overdrive transmission

Lock-up transmission Lock-up transmission

First gear ratio 3.974

Second gear ratio 2.318

Third gear ratio 1.516

Fourth gear ratio 1.149

Fifth gear ratio 0.858

Sixth gear ratio 0.674

Reverse gear ratio 3.128

Stall ratio 1.9

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Selectable mode transmission... Selectable mode transmission

Transmission oil cooler... Transmission oil cooler

Drive Type

Drive type... Rear-wheel drive

Drivetrain

Axle ratio... 4.56

Exhaust

Tailpipe... Stainless steel single exhaust

Fuel

Fuel type... regular unleaded

Fuel Tank

Fuel tank capacity... 55.00 gal.

Drive Feature

Traction control... All-speed ABS and driveline traction control

Provisions

* Provisions... Shuttle bus provisions

Fuel Economy and Emissions

Fuel Economy

Secondary fuel type... Gasoline secondary fuel type

Emissions

Emissions... Federal emissions

Emissions tiers... Tier 2 Bin 8 emissions

Suspension and Handling

Suspension

Suspension... Standard ride suspension

Front shock absorbers... Heavy-duty front shock absorbers

Rear shock absorbers... Heavy-duty rear shock absorbers

Driveability

Brakes

Brake type... 4-wheel disc brakes

ABS brakes... Three channel ABS brakes

Ventilated brakes... Front ventilated disc brakes

ABS brakes... 4-wheel antilock (ABS) brakes

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Brake Assistance

Hill start assist Hill start assist

Front Suspension

Anti-roll bar front Front anti-roll bar
Suspension ride type front Independent front suspension

Front Spring

Regular front springs Regular front springs
Springs front Front coil springs

Rear Spring

Springs rear Rear leaf springs
Rear springs Regular grade rear springs

Rear Suspension

Anti-roll bar rear Rear anti-roll bar
Suspension type rear Leaf spring rear suspension

Suspension ride type rear Rigid axle rear suspension

Steering

Steering Hydraulic power-assist steering system
Steering type Re-circulating ball steering
Steering type number of wheels 2-wheel steering system

Exterior

Front Wheels

Front wheels diameter 16"
Front wheels width 6"

Rear Wheels

Rear wheels diameter 16"
Rear wheels width 6"

Front And Rear Wheels

Appearance painted
Material steel

Front Tires

Aspect 75
Sidewalls BSW
Tread AS
Width 225mm
Diameter 16"
Speed S
Type LT
Front wheel - RPM 709

Rear Tires

Aspect 75
Sidewalls BSW
Tread AS
Width 225mm
Diameter 16"
Speed S
Type LT
Rear wheel - RPM 709

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Body Exterior

Exterior Features

* **Number of doors** **1 door**

* **License plate front bracket** **Front license plate bracket**

Body

Body panels Fully galvanized steel body panels with side impact beams

Tires

Front tires LT load rating E

Rear tires LT load rating E

Wheels

Dual rear wheels Dual rear wheels

Convenience

Door Locks

Door locks Manual door locks

Cruise Control

* **Cruise control** **Cruise control with steering wheel mounted controls**

Rear View Mirror

* **Day/Night rearview mirror** **Day/Night rearview mirror**

Front Side Windows

First-row windows Manual first-row windows

Consoles

Console Engine cover console

Power Outlets

12V power outlets 2 12V power outlets

Storage

Door bins front **Driver and passenger door bins**
Glove box Standard glove box

Beverage holders **Front beverage holders**
Console storage **Additional console storage**

Miscellaneous

PRND in IP PRND in IP

Comfort

Climate Control

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Climate control Manual climate control

* **Auxiliary rear heater** **Auxiliary rear heater provision**

Floor Trim

Floor covering Front vinyl floor covering

Floor coverage Front floor coverage

Steering Wheel

Steering wheel telescopic Manual telescopic steering wheel

Steering wheel material Urethane steering wheel

Steering wheel tilt Manual tilting steering wheel

Seats and Trim

Seat Capacity

* **Seating capacity** **1**

Front Seats

* **Front seat type** **Captain front seats**

Driver seat direction Driver seat with 4-way directional controls

* **Split front seats** **Driver bucket seat**

Driver seat fore/aft control Manual driver seat fore/aft control

Front head restraints Fixed front seat head restraints

Armrests front driver Driver seat armrest

Reclining driver seat Manual reclining driver seat

Front Seat Trim

* **Front seat upholstery** **Cloth front seat upholstery**

* **Front seatback upholstery** **Cloth front seatback upholstery**

Gearshifter Material

Gearshifter material Urethane gear shifter material

Entertainment Features

Radio Features

External memory External memory control

Seek scan Seek scan

Speakers

Speakers Standard grade speakers

* **Speakers number** **1**

Audio Features

Wireless streaming Bluetooth wireless audio streaming

Lighting, Visibility and Instrumentation

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Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Instrumentation

Trip odometer	Trip odometer	Instrumentation display	Analog instrumentation display
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Instrumentation Displays

Clock	In-radio display clock
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Instrumentation Gauges

Tachometer	Tachometer	Oil pressure gauge	Oil pressure gauge
Voltmeter	Voltmeter	Engine/electric motor temperature gauge	Engine/electric motor temperature gauge

Instrumentation Warnings

Engine temperature warning	Engine temperature warning	Oil pressure warning	Oil pressure warning
Low fuel warning	Low fuel warning	Battery charge warning	Battery charge warning
Headlights on reminder	Headlights on reminder	Key in vehicle warning	Key in vehicle warning
Service interval warning	Service interval indicator		

Glass

Tinted windows	Light tinted windows
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Headlights

Headlights	Halogen headlights	Headlight type	Aero-composite headlights
Auto headlights	Auto on/off headlight control	Multiple headlights	Multiple enclosed headlights

Front Windshield

Wipers	Variable intermittent front windshield wipers	Sun visor strip	Sun visor strip
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Interior Lighting

Variable panel light	Variable instrument panel light
----------------------------	---------------------------------

Lights

Running lights	Daytime running lights
----------------------	------------------------

Technology and Telematics

Connectivity

Handsfree	Bluetooth handsfree wireless device connectivity
-----------------	--

Internet Access

Internet access	FordPass Connect 4G mobile hotspot internet access
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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

USB Ports

USB ports 2 USB ports

Safety and Security

Airbags

Front impact airbag driver Driver front impact airbag * Number of airbags 1 airbag

Seatbelts

Height adjustable seatbelts Front height adjustable seatbelts Seatbelt pretensioners Front seatbelt pretensioners

* Seatbelt pretensioners number .. 1 seatbelt pretensioner

Security System

Vehicle tracker Fleet Telematics Modem vehicle tracker

Traction Control

Electronic stability control Electronic stability control system

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Warranty

Standard Warranty

Basic Warranty

Basic warranty 36 months/36,000 miles

Powertrain Warranty

Powertrain warranty 60 months/60,000 miles

Corrosion Perforation

Corrosion perforation warranty 60 months/unlimited

Roadside Assistance Warranty

Roadside warranty 60 months/60,000 miles

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Undercoating VG-104

[Home](#) > [Products](#) > [Environmental Protection Products](#) > [Undercoating VG-104](#)

OEM-Approved Solvent Undercoating / VG-104

Since about 2005 many states and municipalities have been using liquid nano de-icing brines (Magnesium and Calcium Chloride) to reduce icy spots on roads and to make winter driving conditions safer. Undercoating formulas and technology have changed to better combat these new brines and protect vehicles.

VG-104 is an OEM-Approved, high performance solvent based coating for the underside vehicles and highway trailers, that provides a flexible and abrasion resistant coating for superior protection against corrosion caused by moisture, salt and alkalis.

- Asphalt-based Undercoating with self-healing properties, for superior adhesion compared NOT an old-tech Rubberized formula.
- VG-104 is designed to be applied one-time, no annual reapplication needed like oil-based product lines.
- VG 104 is tested specifically against the [liquid de-icing brines](#), so you are getting a **PROVEN** anti-rust solution that does not require an annual re-application or inspection
- Full cure in about 24 hours. Will not come off on clothes or drip on your driveway, unlike many oil-based products which remain viscous even months after application.
- Product is VOC compliant for those states with these regulations

Warranty Available for passenger vehicles less than 36 months old. [Click here](#) to see Installer Map and get a quote.

[Undercoating on GM Truck Frames](#)

[VIEW THE OFFICIAL PRODUCT DATA SHEET](#)

Related Videos:



Install ValuGard Undercoating on a vehicle



About Us

VALUGARD products, provided by Automotive International, Inc., are sold, recommended and endorsed by many major auto manufacturers including General Motors, Chrysler, Ford, Hyundai, Mazda, Nissan, Kia, Mitsubishi, and Heil. Automotive International (AI) products are featured in many technical service bulletins issued by vehicle manufacturers and often marketed under their label. The products are 100% employee-safe and meet all VOC requirements. Made from the highest quality raw materials available, VALUGARD products, by AI, set the standards for environmental protection, prep and reconditioning chemicals, body shop and retail products globally. Customers worldwide have acknowledged AI products as the most valuable tools in their arsenals.



PRODUCT DATA SHEET

Undercoating / VG-104

VOC compliant

Automobile Manufacturer Engineering Approved.

Features: *ValuGard Undercoating* is a cosmetically attractive black coating that provides insulation, sound deadening and anti corrosive protection to cars, trucks, and R.V.'s. Wax-based, it remains flexible in the coldest temperatures, yet, will not drip or run under even extreme high temperature. *Automobile Manufacturer Engineering Approved.*

Benefits: Protects underbody from corrosion provides quieter ride, gives a “finished” cosmetic appearance to wheel wells and underbody components. No messy equipment clean up using the **VG-118** application system!

Uses: Wheel wells and underbody on cars, trucks and recreational vehicles.

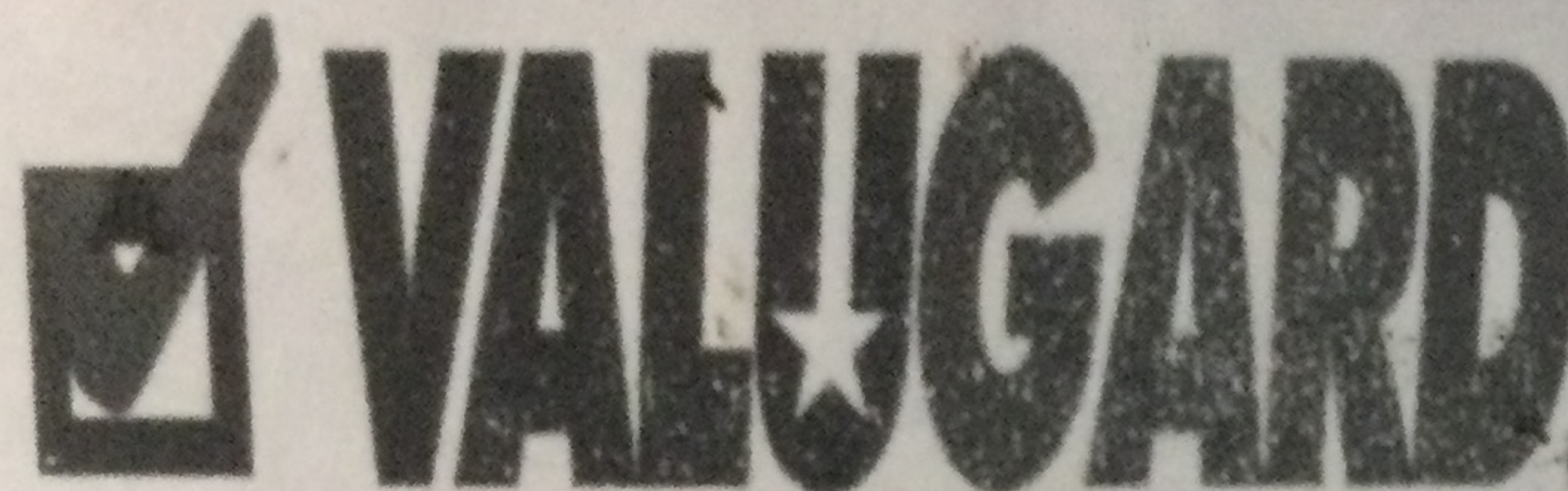
Directions: Refer to container or separate installation instruction sheet. Or, visit our web site for further information. One bottle treats one average size vehicle.

Tips: Store at room temperature. Do not apply to heat shields, exhaust components, drive shaft or within 6” of axle terminus.

Sizes: VG-104 = 12 quarts per case
VG-104K = 16 gallon keg
VG-104D = 55 gallon drum



Automotive International, Inc. * 8855 Blue Ash Road * Cincinnati, OH 45242
Phone: 513.489.7883 * Fax: 513.489.1329 * Web Site: www.valugard.net



UNDERCOAT

DIRECTIONS

Surface to be coated should be completely free of dirt, oil and grease. Apply with airless spray system or transfer product to quart bottles and use VG-118. Recommended spraying materials at pressures from 60 to 80 lbs., thus giving the desired coating film and texture.

When spraying underbody, care should be taken not to spray the following parts:

- | | | |
|--------------|---------------|----------------------|
| •Drive Shaft | •Heat Shield | •Exhaust Manifold |
| •Oil Pan | •Transmission | •Catalytic Converter |
| •Brake Drums | •Brake Discs | •Parking Brake Cable |

AUTOMOTIVE INTERNATIONAL, INC.
8855 BLUE ASH ROAD
CINCINNATI, OH 45242
1-800-543-7156
WWW.AUTOINT.COM
MADE IN U.S.A

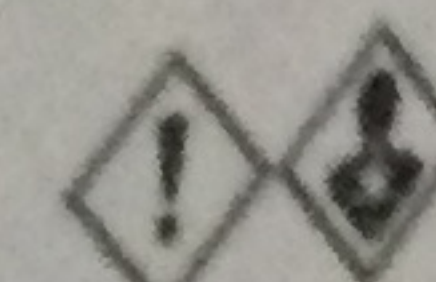
UNDERCOAT 55 GALLON

Hazard Statement: H227 Combustible Liquid H315 Causes skin irritation H320 Causes eye irritation H373 May cause damage to organs through prolonged or repeated exposure

Precautionary Statements: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves, protective clothing, eye protection, and face protection. P280 Do not eat, drink or smoke when using this product. P270 Do not eat, drink or smoke when using this product. P273 Do not release into the environment. Wash exposed areas thoroughly after handling.

Response: P301+P312 IF SWALLOWED: Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P303+P361+P353 IF ON CLOTHING: Remove contaminated clothing. P305+P351+P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do; continue rinsing. P337+P313 If eye irritation persists get medical advice and/or attention. P314 Get medical advice/attention if you feel unwell. P331 Do not induce vomiting.

Storage: P403 Store in a well ventilated place.
Disposal: P501 Dispose of contents and container in accordance with local, regional, national and international regulation.



Warning

PART NO. VG-104D

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330



Client Proposal

Prepared by:

Mark Prohaska

Office: 641-923-2855

Quote ID: End158Air

Date: 10/25/2022



Pritchard Commercial Sales | 1400 South 24th Street Suite B, Clear Lake, Iowa, 50428

Office: 641-923-2855



Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle

Code	Description
Base Vehicle	
E4F	Base Vehicle Price (E4F)
Packages	
782A	Order Code 782A <i>Includes:</i> <ul style="list-style-type: none">- Engine: 7.3L V8 Premium-Rated- Transmission: 6-Speed O/D w/Tow Haul- Includes auxiliary cooler.- 4.56 Axle Ratio- GVWR: 14,500 lb Payload Package- Tires: LT225/75R16E BSW A/S- Hankook DynaPro HT.- Wheels: 16" x 6" White Painted Steel- Radio: AM/FM Stereo w/Clock Display & 2 Speakers- Includes Bluetooth capability and USB input.- Auxiliary Fuel Port <i>Located on the fuel tank, offers entry point access to fuel tank for specialized gas powered equipment such as a power generator, powered wheelchair lift, etc.</i>
Powertrain	
99N	Engine: 7.3L V8 Premium-Rated
44P	Transmission: 6-Speed O/D w/Tow Haul <i>Includes auxiliary cooler.</i>
X83	4.56 Axle Ratio
20F	GVWR: 14,500 lb Payload Package
Wheels & Tires	
T68	Tires: LT225/75R16E BSW A/S <i>Hankook DynaPro HT.</i>
646	Wheels: 16" x 6" White Painted Steel
Seats & Seat Trim	
21T	Captain's Chair Driver Side Only <i>Includes:</i> <ul style="list-style-type: none">- Cloth Captain's Chairs- Passenger Side Air Bag Delete
M	Cloth Captain's Chairs

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle (cont'd)

Code	Description
Other Options	
L23	Raw Material Surcharge
PAINT	Monotone Paint Application
158WB	158" Wheelbase
153	License Plate Bracket
60X	Right Hand Door Delete <i>Deletes passenger side A-pillar grab handle, right hand seat belt system and hardware, passenger side air bag, under-seat stowage, passenger side sun visor, passenger side speaker and headliner.</i> <i>Includes:</i> - Exterior Mirror Delete
625	Day/Night Interior Rearview Mirror
525	Cruise Control
41H	Engine Block Heater <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i>
587	Radio: AM/FM Stereo w/Clock Display & 2 Speakers <i>Includes Bluetooth capability and USB input.</i>
559	Frame Pucks (Isolators) <i>Includes 12 body mounts.</i>
47Z	Ambulance Prep Package Not Required Required on orders not destined for ambulance use.
18A	High Series Exterior Upgrade Package <i>Includes:</i> - Front Chrome Bumper - Chrome Grille
47B	Shuttle Bus Prep Package <i>Includes:</i> - High Series Exterior Upgrade Package - Front Chrome Bumper - Chrome Grille - Engine Block Heater <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i> - Frame Pucks (Isolators) <i>Includes 12 body mounts.</i> - License Plate Bracket - Front Headliner Delete

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Price Level: 330 | Quote ID: End158Air

As Configured Vehicle (cont'd)

Code	Description
	- Front Dome Lamp Delete
54F	Exterior Mirror Delete
162	Vinyl Floor Covering

Fleet Options

57J	Auxiliary Heater Connection Package Requires valid FIN code. <i>Includes rear fan controls.</i>
942	Non-Configurable Daytime Running Lamps Requires valid FIN code.
672	Maximum Front GAWR: 5000 lbs. Requires valid FIN code.
FLADCR	Fleet Advertising Credit
WARANT	Fleet Customer Powertrain Limited Warranty Requires valid FIN code. <i>Ford is increasing the 5-year 60,000-mile limited powertrain warranty to 5-years, 100,000 miles. Only Fleet purchasers with a valid Fleet Identification Number (FIN code) will receive the extended warranty. When the sale is entered into the sales reporting system with a sales type fleet along with a valid FIN code, the warranty extension will automatically be added to the vehicle. The extension will stay with the vehicle even if it is subsequently sold to a non-fleet customer before the expiration. This extension applies to both gas and diesel powertrains. Dealers can check for the warranty extension on eligible fleet vehicles in OASIS. Please refer to the Warranty and Policy Manual section 3.13.00 Gas Engine Commercial Warranty. This change will also be reflected in the printed Warranty Guided distributed with the purchase of every new vehicle.</i>

Emissions

425	50 State Emission System
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Exterior Color

YZ_02	Oxford White
-------	--------------

Interior Color

ME_01	Medium Flint w/Cloth Captain's Chairs
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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs

Dimensions

- Conventional Capacity: 7,500 lbs.
- Vehicle body length: 261"
- Vehicle body height: 80"
- Front track: 69"
- Vehicle turning radius: 27'
- Axle to end of frame: 69"
- Frame yield strength (psi): 36000
- Front brake diameter: 13.6"
- Headroom first-row: 42.0"
- Shoulder room first-row: 68.1"
- GCWR: 22,000 lbs.
- Vehicle body width: 79"
- Wheelbase: 158"
- Rear track: 78"
- Cab to axle: 100"
- Frame section modulus: 6 cu.in.
- Front bumper to back of cab: 92"
- Rear brake diameter: 13.6"
- Leg room first-row: 42.1"
- Hip room first-row: 65.6"

Powertrain

- 7.3L V-8 variable valve control, engine with 325HP
- Injection Type: sequential MPI
- Horsepower: 325 HP@3750 RPM
- * **Engine block heater**
- TorqShift 6-speed automatic
- Recommended fuel: regular unleaded
- Engine cylinders: V-8
- Spark ignition system
- Torque: 450 lb.-ft.@3750 RPM
- Radiator
- Rear-wheel drive
- All-speed ABS and driveline traction control

Fuel Economy and Emissions

- Gasoline secondary fuel type
- Federal emissions

Suspension and Handling

- Standard ride suspension
- Heavy-duty rear shock absorbers
- Heavy-duty front shock absorbers

Driveability

- 4-wheel disc brakes
- 4-wheel antilock (ABS) brakes
- Hill start assist
- Front anti-roll bar
- Rigid axle rear suspension
- Rear anti-roll bar
- Re-circulating ball steering
- Front ventilated disc brakes
- Three channel ABS brakes
- Independent front suspension
- Front coil springs
- Leaf spring rear suspension
- Hydraulic power-assist steering system
- 2-wheel steering system

Body Exterior

- * **1 door**
- Monotone paint
- Black windshield trim
- Clearcoat paint
- Black side window trim
- Black door handles

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Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

- * **Chrome front bumper**
- * **Chrome grille**
- 16 x 6-inch front and dual rear painted steel wheels
- Black front bumper rub strip
- LT225/75RS16 AS BSW front and rear tires

Convenience

- Manual door locks
- * **Day/Night rearview mirror**
- Engine cover console
- Standard glove box
- Driver and passenger door bins
- * **Cruise control with steering wheel mounted controls**
- Manual first-row windows
- Additional console storage
- Front beverage holders
- PRND in IP

Comfort

- Manual climate control
- Front vinyl floor covering
- Manual tilting steering wheel
- Urethane steering wheel
- * **Auxiliary rear heater provision**
- Front floor coverage
- Manual telescopic steering wheel

Seats and Trim

- * **Seating capacity: 1**
- * **Captain front seats**
- Fixed front seat head restraints
- Manual reclining driver seat
- * **Cloth front seat upholstery**
- * **Driver bucket seat**
- Driver seat with 4-way directional controls
- Driver seat armrest
- Manual driver seat fore/aft control

Entertainment Features

- AM/FM stereo radio
- External memory control
- Standard grade speakers
- Fixed audio antenna
- Seek scan
- * **Speakers number: 1**
- Bluetooth wireless audio streaming

Lighting, Visibility and Instrumentation

- Analog instrumentation display
- In-radio display clock
- Oil pressure gauge
- Voltmeter
- Aero-composite headlights
- Auto on/off headlight control
- Variable intermittent front windshield wipers
- Variable instrument panel light
- Trip odometer
- Tachometer
- Engine/electric motor temperature gauge
- Light tinted windows
- Halogen headlights
- Multiple enclosed headlights
- Sun visor strip
- Daytime running lights

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Technology and Telematics

- Bluetooth handsfree wireless device connectivity
- FordPass Connect 4G mobile hotspot internet access
- 2 USB ports

Safety and Security

- Driver front impact airbag
- Front height adjustable seatbelts
- * **1 seatbelt pre-tensioner**
- Electronic stability control system
- * **1 airbag**
- Front seatbelt pretensioners
- Fleet Telematics Modem vehicle tracker

Dimensions

General Weights

* Curb weight	5,446 lbs.	* Rear curb weight	2,419 lbs.
GVWR	14,500 lbs.	Payload	8,980 lbs.

Trailing Weights

Conventional capacity	7,500 lbs.	GCWR	22,000 lbs.
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Front Weights

* Front curb weight	3,027 lbs.	GAWR front	5,000 lbs.
Axle capacity front	5,000 lbs.	Spring rating front	5,000 lbs.
Tire/wheel capacity front	5,000 lbs.		

Rear Weights

GAWR rear	9,600 lbs.	Axle capacity rear	9,600 lbs.
Spring rating rear	9,600 lbs.	Tire/wheel capacity rear	9,880 lbs.

Off Road

Loading floor height	26.0 "
----------------------------	--------

Exterior Measurements

Vehicle body length	261"	Vehicle body width	79"
Vehicle body height	80"	Wheelbase	158"
Front brake diameter	13.6"	Rear brake diameter	13.6"
Rear frame height loaded	26"	Front track	69"
Rear track	78"	Vehicle turning radius	27'
Cab to axle	100"	Axle to end of frame	69"
Frame section modulus	6 cu.in.	Frame yield strength (psi)	36000
Front bumper to back of cab	92"		

Headroom

Headroom first-row	42.0"
--------------------------	-------

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Legroom

Leg room first-row 42.1"

Shoulder Room

Shoulder room first-row 68.1"

Hip Room

Hip room first-row 65.6"

Powertrain

Engine

Engine 7.3L V-8 variable valve control, engine with 325HP

Engine cylinders V-8

Engine location Front mounted engine

Engine mounting direction Longitudinal mounted engine

Cylinder head material Aluminum cylinder head

Valves per cylinder 2

Injection type sequential MPI

Ignition Spark ignition system

Engine block material Iron engine block

Engine Specs

Displacement 7.3L

Bore 4.21"

Compression ratio 10.5

cc 445 cu.in.

Stroke 3.98"

SAEJ1349 AUG2004 compliant

Engine Power

Horsepower 325 HP@3750 RPM

Torque 450 lb.-ft. @3750 RPM

Alternator

Alternator amps 210A

Alternator type Heavy-duty alternator

Battery

Battery amps 78Ah

Battery rating 750CCA

Battery type HD lead acid battery

Engine Extras

* **Block heater** **Engine block heater**

Radiator Radiator

Transmission

Transmission TorqShift 6-speed automatic

Transmission electronic control Transmission electronic control

Overdrive transmission Overdrive transmission

Lock-up transmission Lock-up transmission

First gear ratio 3.974

Second gear ratio 2.318

Third gear ratio 1.516

Fourth gear ratio 1.149

Fifth gear ratio 0.858

Sixth gear ratio 0.674

Reverse gear ratio 3.128

Stall ratio 1.9

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Selectable mode transmission... Selectable mode transmission

Transmission oil cooler... Transmission oil cooler

Drive Type

Drive type... Rear-wheel drive

Drivetrain

Axle ratio... 4.56

Exhaust

Tailpipe... Stainless steel single exhaust

Fuel

Fuel type... regular unleaded

Fuel Tank

Fuel tank capacity... 55.00 gal.

Drive Feature

Traction control... All-speed ABS and driveline traction control

Provisions

* Provisions... Shuttle bus provisions

Fuel Economy and Emissions

Fuel Economy

Secondary fuel type... Gasoline secondary fuel type

Emissions

Emissions... Federal emissions

Emissions tiers... Tier 2 Bin 8 emissions

Suspension and Handling

Suspension

Suspension... Standard ride suspension

Front shock absorbers... Heavy-duty front shock absorbers

Rear shock absorbers... Heavy-duty rear shock absorbers

Driveability

Brakes

Brake type... 4-wheel disc brakes

ABS brakes... Three channel ABS brakes

Ventilated brakes... Front ventilated disc brakes

ABS brakes... 4-wheel antilock (ABS) brakes

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Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Brake Assistance

Hill start assist Hill start assist

Front Suspension

Anti-roll bar front Front anti-roll bar
Suspension ride type front Independent front suspension

Front Spring

Regular front springs Regular front springs
Springs front Front coil springs

Rear Spring

Springs rear Rear leaf springs
Rear springs Regular grade rear springs

Rear Suspension

Anti-roll bar rear Rear anti-roll bar
Suspension type rear Leaf spring rear suspension

Suspension ride type rear Rigid axle rear suspension

Steering

Steering Hydraulic power-assist steering system
Steering type Re-circulating ball steering
Steering type number of wheels 2-wheel steering system

Exterior

Front Wheels

Front wheels diameter 16" Front wheels width 6"

Rear Wheels

Rear wheels diameter 16" Rear wheels width 6"

Front And Rear Wheels

Appearance painted Material steel

Front Tires

Aspect 75 Diameter 16"
Sidewalls BSW Speed S
Tread AS Type LT
Width 225mm Front wheel - RPM 709

Rear Tires

Aspect 75 Diameter 16"
Sidewalls BSW Speed S
Tread AS Type LT
Width 225mm Rear wheel - RPM 709

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Body Exterior

Exterior Features

* Number of doors 1 door

* License plate front bracket Front license plate bracket

Body

Body panels Fully galvanized steel body panels with side impact beams

Tires

Front tires LT load rating E

Rear tires LT load rating E

Wheels

Dual rear wheels Dual rear wheels

Convenience

Door Locks

Door locks Manual door locks

Cruise Control

* Cruise control ... Cruise control with steering wheel mounted controls

Rear View Mirror

* Day/Night rearview mirror Day/Night rearview mirror

Front Side Windows

First-row windows Manual first-row windows

Consoles

Console Engine cover console

Power Outlets

12V power outlets 2 12V power outlets

Storage

Door bins front Driver and passenger door bins
Glove box Standard glove box

Beverage holders Front beverage holders
Console storage Additional console storage

Miscellaneous

PRND in IP PRND in IP

Comfort

Climate Control

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Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Climate control Manual climate control

* **Auxiliary rear heater** **Auxiliary rear heater provision**

Floor Trim

Floor covering Front vinyl floor covering

Floor coverage Front floor coverage

Steering Wheel

Steering wheel telescopic Manual telescopic steering wheel

Steering wheel material Urethane steering wheel

Steering wheel tilt Manual tilting steering wheel

Seats and Trim

Seat Capacity

* **Seating capacity** **1**

Front Seats

* **Front seat type** **Captain front seats**

Driver seat direction Driver seat with 4-way directional controls

* **Split front seats** **Driver bucket seat**

Driver seat fore/aft control Manual driver seat fore/aft control

Front head restraints Fixed front seat head restraints

Armrests front driver Driver seat armrest

Reclining driver seat Manual reclining driver seat

Front Seat Trim

* **Front seat upholstery** **Cloth front seat upholstery**

* **Front seatback upholstery** **Cloth front seatback upholstery**

Gearshifter Material

Gearshifter material Urethane gear shifter material

Entertainment Features

Radio Features

External memory External memory control

Seek scan Seek scan

Speakers

Speakers Standard grade speakers

* **Speakers number** **1**

Audio Features

Wireless streaming Bluetooth wireless audio streaming

Lighting, Visibility and Instrumentation

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Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Instrumentation

Trip odometer	Trip odometer	Instrumentation display ..	Analog instrumentation display
---------------------	---------------	----------------------------	--------------------------------

Instrumentation Displays

Clock	In-radio display clock
-------------	------------------------

Instrumentation Gauges

Tachometer	Tachometer	Oil pressure gauge	Oil pressure gauge
Voltmeter	Voltmeter	Engine/electric motor temperature gauge	Engine/electric motor temperature gauge

Instrumentation Warnings

Engine temperature warning ..	Engine temperature warning	Oil pressure warning	Oil pressure warning
Low fuel warning	Low fuel warning	Battery charge warning ..	Battery charge warning
Headlights on reminder ..	Headlights on reminder	Key in vehicle warning ..	Key in vehicle warning
Service interval warning	Service interval indicator		

Glass

Tinted windows	Light tinted windows
----------------------	----------------------

Headlights

Headlights	Halogen headlights	Headlight type	Aero-composite headlights
Auto headlights	Auto on/off headlight control	Multiple headlights	Multiple enclosed headlights

Front Windshield

Wipers ..	Variable intermittent front windshield wipers	Sun visor strip	Sun visor strip
-----------	---	-----------------------	-----------------

Interior Lighting

Variable panel light	Variable instrument panel light
----------------------------	---------------------------------

Lights

Running lights	Daytime running lights
----------------------	------------------------

Technology and Telematics

Connectivity

Handsfree	Bluetooth handsfree wireless device connectivity
-----------------	--

Internet Access

Internet access ..	FordPass Connect 4G mobile hotspot internet access
--------------------	--



2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

USB Ports

USB ports 2 USB ports

Safety and Security

Airbags

Front impact airbag driver Driver front impact airbag

* Number of airbags 1 airbag

Seatbelts

Height adjustable seatbelts Front height adjustable seatbelts

Seatbelt pretensioners Front seatbelt pretensioners

* Seatbelt pretensioners number 1 seatbelt pretensioner

Security System

Vehicle tracker Fleet Telematics Modem vehicle tracker

Traction Control

Electronic stability control Electronic stability control system



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Warranty

Standard Warranty

Basic Warranty

Basic warranty 36 months/36,000 miles

Powertrain Warranty

Powertrain warranty 60 months/60,000 miles

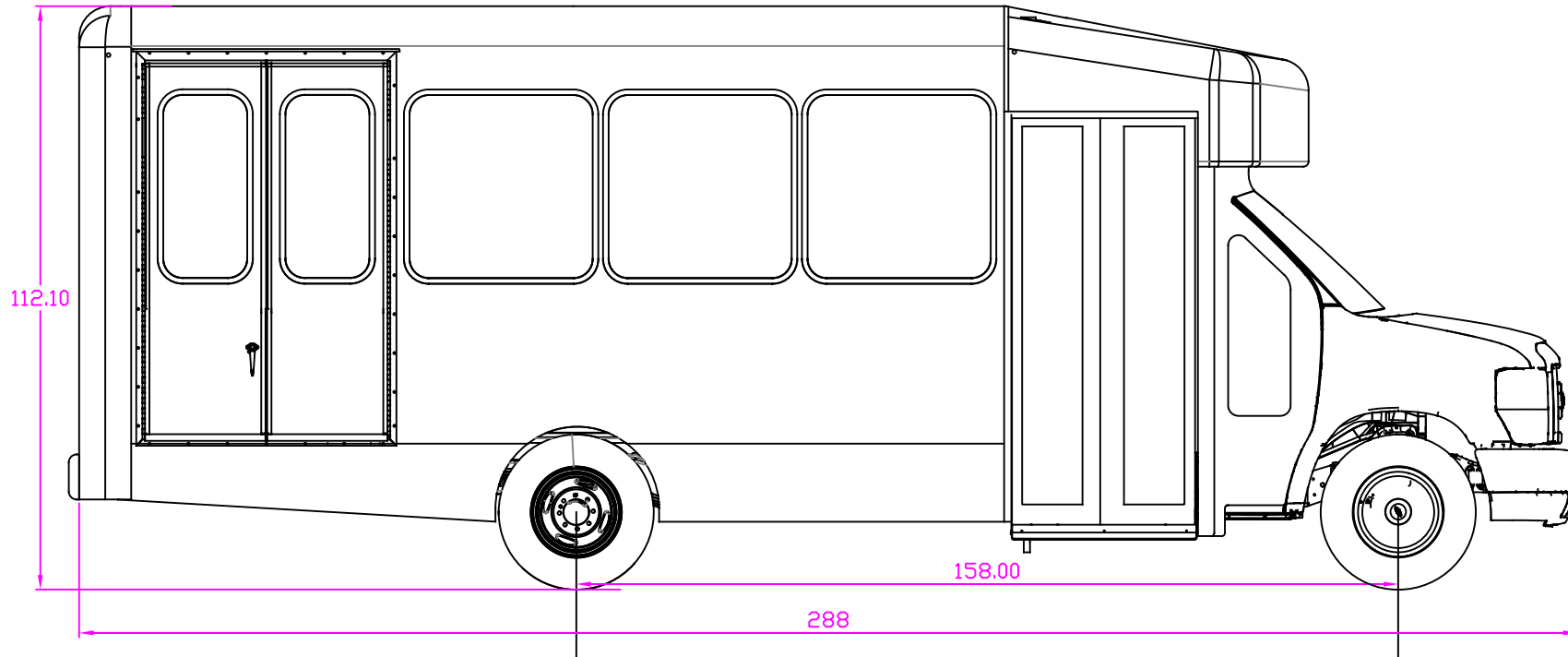
Corrosion Perforation


Corrosion perforation warranty 60 months/unlimited

Roadside Assistance Warranty

Roadside warranty 60 months/60,000 miles

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DRAWN MAB 8/16/22			
MATERIAL -		TITLE:	
FINISH -		24' 158WB ELEVATION	
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL +/-1/4 ANGULAR MACH +/-1 TWO PLACE DECIMAL +/-0.03 THREE PLACE DECIMAL +/-0.01		FDOT FP CS VIEW	
DO NOT SCALE DRAWING		SIZE DWG. NO. B 24' 158WB ELEVATION FDOT FP	REV -
SCALE: NONE		WEIGHT: -	SHEET 1 OF 1

Safe Fleet School Bus Roof Hatches

Ventilator and Emergency Escape Hatches

NEW
ADVANTAGE
HATCH

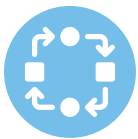
See inside for details



Enhance student safety and comfort with a hatch from the leader in bus safety equipment.



Safe Fleet roof hatches demonstrate over 40 years of proven performance and come in a wide variety of styles and configurations. Hatches are also customizable to meet your specific application needs. Each hatch features a low-profile design and meets all FMVSS and CMVSS regulations.



Adaptable

Low profile design adapts to wide range of roof surfaces



High Strength

Constructed of high strength UV stable materials



Made in the USA

Proudly manufactured in North Carolina with over 40 years of proven performance



Warranty

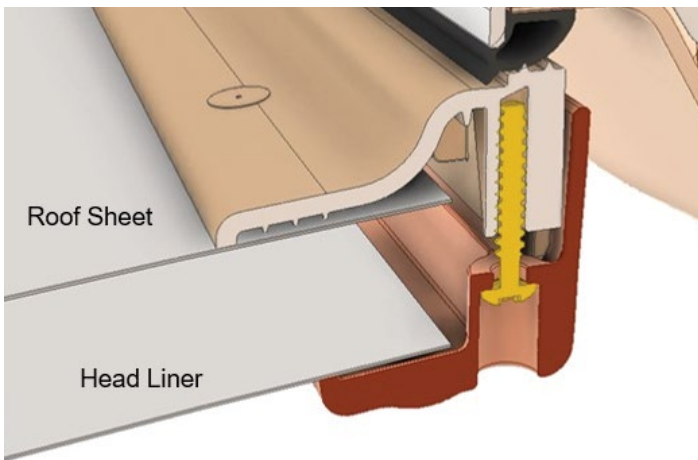
5 Year Manufacturer Warranty

Ventilator and Emergency Escape Hatches

New Advantage Hatch

The Advantage Hatch escape hatch and ventilator features intuitive operation and advanced design for overall ease-of-use and improved functionality. The ergonomic handle, operates in one easily determined direction and the self-aligning latch mechanism makes for improved sealing.

- Internal clamping eliminates external fasteners and potential leak points
- Self-aligning latch
- Larger hand grabs for easy closing from vented position
- Low-Profile
- Improved sealing
- Direct replacement for Transpec and Prolo models
- Meets FMVSS and CMVSS Standards as well as the D250 Standard for Canadian school buses





Triple Value Safety Vent

The Triple Value Safety Vent is a combination roof ventilator/emergency exit that provides 5-position fresh air ventilation and incorporates 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.

- Interchangeable with earlier Transpec and Proto models
- Available in various radiuses to fit all roof curvatures
- Constructed with high-strength UV stable materials
- Meets FMVSS and CMVSS Standards as well as the D250 Standard for Canadian school buses



Power Safety Vent

The Powered Safety Vent is a combination roof ventilator/emergency exit that provides 5-position, fresh air ventilation and an electric fan for extracting condensation, stale or hot air from inside the vehicle to improve passenger comfort. The hatch also features a simple release handle for emergency exit.

- Multi-position fresh air vent
- Emergency exit
- High-capacity powered exhaust fan provides ventilation when the hatch is in the closed position



Safe Fleet Ventilator and Emergency Escape Hatch Comparison Chart

	COLORS	REFLECTIVE STRIPING	ADHESIVE SEALANT	HATCH AJAR ALARM	STATIC VENT	MULTILINGUAL DECALS	VANDAL-PROOF LOCK
MODEL	STANDARD FEATURE & OPTIONS						
Advantage Hatch	White/Light Gray	●	●	●	Coming Soon	●	●
Triple Value Safety Vent	White/Light Gray	●	●	●	●	●	●
Powered Safety Vent	White/Light Gray	●	●	●	●	●	●

● Standard ● Optional



1258-SF-Hatch-BR-SB-110421

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515



Client Proposal

Prepared by:

Mark Prohaska

Office: 641-923-2855

Quote ID: End158A.25

Date: 05/28/2024



Pritchard Commercial Sales | 1400 South 24th Street Suite B, Clear Lake, Iowa, 50428

Office: 641-923-2855



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05/28/2024

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Price Level: 515 | Quote ID: End158A.25

As Configured Vehicle

Code	Description
Base Vehicle	
E4F	Base Vehicle Price (E4F)
Packages	
782A	Order Code 782A <i>Includes:</i> <ul style="list-style-type: none">- Engine: 7.3L V8 Premium-Rated- Transmission: 6-Speed O/D w/Tow Haul <i>Includes auxiliary cooler.</i>- 4.56 Axle Ratio- GVWR: 14,500 lb Payload Package- Tires: LT225/75R16E BSW A/S <i>Hankook DynaPro HT.</i>- Wheels: 16" x 6" White Painted Steel- Radio: AM/FM Stereo w/Clock Display & 2 Speakers <i>Includes Bluetooth capability and USB input.</i>- Auxiliary Fuel Port <i>Located on the fuel tank, offers entry point access to fuel tank for specialized gas powered equipment such as a power generator, powered wheelchair lift, etc.</i>
Powertrain	
99N	Engine: 7.3L V8 Premium-Rated
44P	Transmission: 6-Speed O/D w/Tow Haul <i>Includes auxiliary cooler.</i>
X83	4.56 Axle Ratio
20F	GVWR: 14,500 lb Payload Package
Wheels & Tires	
T68	Tires: LT225/75R16E BSW A/S <i>Hankook DynaPro HT.</i>
646	Wheels: 16" x 6" White Painted Steel
Seats & Seat Trim	
21T	Captain's Chair Driver Side Only <i>Includes:</i> <ul style="list-style-type: none">- Cloth Captain's Chairs- Passenger Side Air Bag Delete
M	Cloth Captain's Chairs

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515 | Quote ID: End158A.25

As Configured Vehicle (cont'd)

Code	Description
Other Options	
PAINT	Monotone Paint Application
158WB	158" Wheelbase
153	License Plate Bracket
60X	Right Hand Door Delete <i>Deletes passenger side A-pillar grab handle, right hand seat belt system and hardware, passenger side air bag, under-seat stowage, passenger side sun visor, passenger side speaker and headliner.</i> <i>Includes:</i> <i>- Exterior Mirror Delete</i>
625	Day/Night Interior Rearview Mirror
525	Cruise Control
41H	Engine Block Heater <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i>
587	Radio: AM/FM Stereo w/Clock Display & 2 Speakers <i>Includes Bluetooth capability and USB input.</i>
559	Frame Pucks (Isolators) <i>Includes 12 body mounts.</i>
47Z	Ambulance Prep Package Not Required Required on orders not destined for ambulance use.
18A	High Series Exterior Upgrade Package <i>Includes:</i> <i>- Front Chrome Bumper</i> <i>- Chrome Grille</i>
47B	Shuttle Bus Prep Package <i>Includes:</i> <i>- High Series Exterior Upgrade Package</i> <i>- Front Chrome Bumper</i> <i>- Chrome Grille</i> <i>- Engine Block Heater</i> <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i> <i>- Frame Pucks (Isolators)</i> <i>Includes 12 body mounts.</i> <i>- License Plate Bracket</i> <i>- Front Headliner Delete</i> <i>- Front Dome Lamp Delete</i>

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Price Level: 515 | Quote ID: End158A.25

As Configured Vehicle (cont'd)

Code	Description
54F	Exterior Mirror Delete
162	Vinyl Floor Covering

Fleet Options

57J	Auxiliary Heater Connection Package Requires valid FIN code. <i>Includes rear fan controls.</i>
942	Non-Configurable Daytime Running Lamps Requires valid FIN code.
672	Maximum Front GAWR: 5000 lbs. Requires valid FIN code.
WARANT	Fleet Customer Powertrain Limited Warranty Requires valid FIN code. <i>Ford is increasing the 5-year 60,000-mile limited powertrain warranty to 5-years, 100,000 miles. Only Fleet purchasers with a valid Fleet Identification Number (FIN code) will receive the extended warranty. When the sale is entered into the sales reporting system with a sales type fleet along with a valid FIN code, the warranty extension will automatically be added to the vehicle. The extension will stay with the vehicle even if it is subsequently sold to a non-fleet customer before the expiration. This extension applies to both gas and diesel powertrains. Dealers can check for the warranty extension on eligible fleet vehicles in OASIS. Please refer to the Warranty and Policy Manual section 3.13.00 Gas Engine Commercial Warranty. This change will also be reflected in the printed Warranty Guided distributed with the purchase of every new vehicle.</i>

Emissions

425	50 State Emission System
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Exterior Color

YZ_02	Oxford White
-------	--------------

Interior Color

ME_02	Medium Flint w/Cloth Captain's Chairs
-------	---------------------------------------



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05/28/2024

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515 | Quote ID: End158A.25

Selected Equip & Specs

Dimensions

- Conventional Capacity: 7,500 lbs.
- Vehicle body length: 261.1"
- Vehicle body height: 80.5"
- Front track: 69.4"
- Vehicle turning radius: 27.4'
- Axle to end of frame: 68.5"
- Frame yield strength (psi): 36000.0
- Front brake diameter: 13.6"
- Headroom first-row: 42.0"
- Shoulder room first-row: 68.1"
- GCWR: 22,000 lbs.
- Vehicle body width: 79.4"
- Wheelbase: 158.0"
- Rear track: 77.7"
- Cab to axle: 100.0"
- Frame section modulus: 6.4 cu.in.
- Front bumper to back of cab: 92.5"
- Rear brake diameter: 13.6"
- Leg room first-row: 42.1"
- Hip room first-row: 65.6"

Powertrain

- 7.3L V-8 variable valve control, engine with 325HP
- Injection Type: sequential MPI
- Horsepower: 325 HP@3750 RPM
- * **Engine block heater**
- TorqShift 6-speed automatic
- Recommended fuel: regular unleaded
- Engine cylinders: V-8
- Spark ignition system
- Torque: 450 lb.-ft.@3750 RPM
- Radiator
- Rear-wheel drive
- All-speed ABS and driveline traction control

Fuel Economy and Emissions

- Gasoline secondary fuel type
- Federal emissions

Suspension and Handling

- Standard ride suspension
- Heavy-duty rear shock absorbers
- Heavy-duty front shock absorbers

Driveability

- 4-wheel disc brakes
- 4-wheel antilock (ABS) brakes
- Hill Start Assist
- Front anti-roll bar
- Rigid axle rear suspension
- Rear anti-roll bar
- Re-circulating ball steering
- Front ventilated disc brakes
- Three channel ABS brakes
- Independent front suspension
- Front coil springs
- Leaf spring rear suspension
- Hydraulic power-assist steering system
- 2-wheel steering system

Body Exterior

- * **1 door**
- Monotone paint
- Black windshield trim
- Clearcoat paint
- Black side window trim
- Black door handles

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Prepared by: Mark Prohaska

05/28/2024

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515 | Quote ID: End158A.25

Selected Equip & Specs (cont'd)

- * **Chrome front bumper**
- * **Chrome grille**
- 16 x 6-inch front and dual rear painted steel wheels
- Black front bumper rub strip
- LT225/75RS16 AS BSW front and rear tires

Convenience

- Manual door locks
- * **Day/Night rearview mirror**
- Engine cover console
- Standard glove box
- Driver and passenger door bins
- * **Cruise control with steering wheel mounted controls**
- Manual first-row windows
- Additional console storage
- Front beverage holders
- PRND in IP

Comfort

- Manual climate control
- Front vinyl floor covering
- Manual tilting steering wheel
- Urethane steering wheel
- * **Auxiliary rear heater provision**
- Front floor coverage
- Manual telescopic steering wheel

Seats and Trim

- * **Seating capacity: 1**
- * **Captain front seats**
- Fixed front seat head restraints
- Manual reclining driver seat
- * **Cloth front seat upholstery**
- * **Driver bucket seat**
- Driver seat with 4-way directional controls
- Driver seat armrest
- Manual driver seat fore/aft control

Entertainment Features

- AM/FM stereo radio
- AM radio
- Seek scan
- * **Speakers number: 1**
- Wireless audio streaming
- In-vehicle audio
- FM radio
- External memory control
- Standard grade speakers
- Fixed audio antenna

Lighting, Visibility and Instrumentation

- Analog instrumentation display
- In-radio display clock
- Oil pressure gauge
- Voltmeter
- Aero-composite headlights
- Auto on/off headlight control
- Variable intermittent front windshield wipers
- Variable instrument panel light
- Trip odometer
- Tachometer
- Engine/electric motor temperature gauge
- Light tinted windows
- Halogen headlights
- Multiple enclosed headlights
- Sun visor strip
- Daytime running lights

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Selected Equip & Specs (cont'd)

Technology and Telematics

- Handsfree wireless device connectivity
- Fleet Telematics Modem selective service internet access
- Mobile app access
- 2 USB ports

Safety and Security

- Driver front impact airbag
- Front height adjustable seatbelts
- * **1 seatbelt pre-tensioner**
- Electronic Stability Control (ESC) electronic stability control system
- * **1 airbag**
- Front seatbelt pretensioners
- Fleet Telematics Modem vehicle tracker

Dimensions

General Weights

* Curb weight	5,446 lbs.	* Rear curb weight	2,419 lbs.
GVWR	14,500 lbs.	Payload	8,980 lbs.

Trailing Weights

Conventional capacity	7,500 lbs.	GCWR	22,000 lbs.
-----------------------------	------------	------------	-------------

Front Weights

* Front curb weight	3,027 lbs.	GAWR front	5,000 lbs.
Axle capacity front	5,000 lbs.	Spring rating front	5,000 lbs.
Tire/wheel capacity front	5,000 lbs.		

Rear Weights

GAWR rear	9,600 lbs.	Axle capacity rear	9,600 lbs.
Spring rating rear	9,600 lbs.	Tire/wheel capacity rear	9,880 lbs.

Off Road

Loading floor height	26.0 "
----------------------------	--------

Exterior Measurements

Vehicle body length	261.1"	Vehicle body width	79.4"
Vehicle body height	80.5"	Wheelbase	158.0"
Front brake diameter	13.6"	Rear brake diameter	13.6"
Rear frame height loaded	26.0"	Front track	69.4"
Rear track	77.7"	Vehicle turning radius	27.4'
Cab to axle	100.0"	Axle to end of frame	68.5"
Frame section modulus	6.4 cu.in.	Frame yield strength (psi)	36000.0
Front bumper to back of cab	92.5"		

Headroom

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Selected Equip & Specs (cont'd)

Headroom first-row 42.0"

Legroom

Leg room first-row 42.1"

Shoulder Room

Shoulder room first-row 68.1"

Hip Room

Hip room first-row 65.6"

Powertrain

Engine

Engine 7.3L V-8 variable valve control, engine with 325HP

Engine cylinders V-8

Engine location Front mounted engine

Engine mounting direction Longitudinal mounted engine

Cylinder head material Aluminum cylinder head

Valves per cylinder 2

Injection type sequential MPI

Ignition Spark ignition system

Engine block material Iron engine block

Engine Specs

Displacement 7.3L

Bore 4.21"

Compression ratio 10.5

cc 445 cu.in.

Stroke 3.98"

SAEJ1349 AUG2004 compliant

Engine Power

Horsepower 325 HP@3750 RPM

Torque 450 lb.-ft. @3750 RPM

Alternator

Alternator amps 210A

Alternator type Heavy-duty alternator

Battery

Battery amps 78Ah

Battery rating 750CCA

Battery type HD lead acid battery

Engine Extras

* **Block heater** **Engine block heater**

Radiator Radiator

Transmission

Transmission TorqShift 6-speed automatic

Transmission electronic control Transmission electronic control

Overdrive transmission Overdrive transmission

Lock-up transmission Lock-up transmission

First gear ratio 3.974

Second gear ratio 2.318

Third gear ratio 1.516

Fourth gear ratio 1.149

Fifth gear ratio 0.858

Sixth gear ratio 0.674

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Selected Equip & Specs (cont'd)

Reverse gear ratio 3.128
Selectable mode transmission... Selectable mode
transmission

Stall ratio 1.9
Transmission oil cooler... Transmission oil cooler

Drive Type

Drive type Rear-wheel drive

Drivetrain

Axle ratio 4.56

Exhaust

Tailpipe Stainless steel single exhaust

Fuel

Fuel type regular unleaded

Fuel Tank

Fuel tank capacity 55.00 gal.

Drive Feature

Traction control.... All-speed ABS and driveline
traction control

Provisions

* Provisions Shuttle bus provisions

Fuel Economy and Emissions

Fuel Economy

Secondary fuel type Gasoline secondary fuel
type

Emissions

Emissions Federal emissions

Emissions tiers Tier 2 Bin 8 emissions

Suspension and Handling

Suspension

Suspension Standard ride suspension

Front shock absorbers... Heavy-duty front shock
absorbers

Rear shock absorbers.... Heavy-duty rear shock
absorbers

Driveability

Brakes

Brake type 4-wheel disc brakes

ABS brakes Three channel ABS brakes

Ventilated brakes... Front ventilated disc brakes

ABS brakes 4-wheel antilock (ABS) brakes

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Selected Equip & Specs (cont'd)

Brake Assistance

Hill start assist Hill Start Assist

Front Suspension

Anti-roll bar front Front anti-roll bar
Suspension ride type front Independent front suspension

Front Spring

Regular front springs Regular front springs
Springs front Front coil springs

Rear Spring

Springs rear Rear leaf springs
Rear springs Regular grade rear springs

Rear Suspension

Anti-roll bar rear Rear anti-roll bar
Suspension type rear Leaf spring rear suspension

Suspension ride type rear Rigid axle rear suspension

Steering

Steering Hydraulic power-assist steering system
Steering type Re-circulating ball steering
Steering type number of wheels 2-wheel steering system

Exterior

Front Wheels

Front wheels diameter 16"
Front wheels width 6"

Rear Wheels

Rear wheels diameter 16"
Rear wheels width 6"

Front And Rear Wheels

Appearance painted
Material steel

Front Tires

Aspect 75
Sidewalls BSW
Tread AS
Width 225mm
Diameter 16"
Speed S
Type LT
Front wheel - RPM 709

Rear Tires

Aspect 75
Sidewalls BSW
Tread AS
Width 225mm
Diameter 16"
Speed S
Type LT
Rear wheel - RPM 709

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Selected Equip & Specs (cont'd)

Body Exterior

Exterior Features

* Number of doors 1 door

* License plate front bracket Front license plate bracket

Body

Body panels Fully galvanized steel body panels with side impact beams

Tires

Front tires LT load rating E

Rear tires LT load rating E

Wheels

Dual rear wheels Dual rear wheels

Convenience

Door Locks

Door locks Manual door locks

Cruise Control

* Cruise control ... Cruise control with steering wheel mounted controls

Rear View Mirror

* Day/Night rearview mirror Day/Night rearview mirror

Front Side Windows

First-row windows Manual first-row windows

Consoles

Console Engine cover console

Power Outlets

12V power outlets 2 12V power outlets

Storage

Door bins front Driver and passenger door bins
Glove box Standard glove box

Beverage holders Front beverage holders
Console storage Additional console storage

Miscellaneous

PRND in IP PRND in IP

Comfort

Climate Control

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Selected Equip & Specs (cont'd)

Climate control Manual climate control

* **Auxiliary rear heater** **Auxiliary rear heater provision**

Floor Trim

Floor covering Front vinyl floor covering

Floor coverage Front floor coverage

Steering Wheel

Steering wheel telescopic Manual telescopic steering wheel

Steering wheel material Urethane steering wheel

Steering wheel tilt Manual tilting steering wheel

Seats and Trim

Seat Capacity

* **Seating capacity** **1**

Front Seats

* **Front seat type** **Captain front seats**

Driver seat direction Driver seat with 4-way directional controls

* **Split front seats** **Driver bucket seat**

Driver seat fore/aft control Manual driver seat fore/aft control

Front head restraints Fixed front seat head restraints

Armrests front driver Driver seat armrest

Reclining driver seat Manual reclining driver seat

Front Seat Trim

* **Front seat upholstery** **Cloth front seat upholstery**

* **Front seatback upholstery** **Cloth front seatback upholstery**

Gearshifter Material

Gearshifter material Urethane gear shifter material

Entertainment Features

Radio Features

External memory External memory control

Seek scan Seek scan

Speakers

Speakers Standard grade speakers

* **Speakers number** **1**

Audio Features

Wireless streaming Wireless audio streaming

Lighting, Visibility and Instrumentation

Instrumentation

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Selected Equip & Specs (cont'd)

Trip odometer Trip odometer

Instrumentation display Analog instrumentation display

Instrumentation Displays

Clock In-radio display clock

Instrumentation Gauges

Tachometer Tachometer

Voltmeter Voltmeter

Oil pressure gauge Oil pressure gauge
Engine/electric motor temperature gauge Engine/electric motor temperature gauge

Instrumentation Warnings

Engine temperature warning Engine temperature warning

Low fuel warning Low fuel warning

Headlights on reminder Headlights on reminder

Service interval warning Service interval indicator

Oil pressure warning Oil pressure warning

Battery charge warning Battery charge warning

Key in vehicle warning Key in vehicle warning

Glass

Tinted windows Light tinted windows

Headlights

Headlights Halogen headlights

Auto headlights Auto on/off headlight control

Headlight type Aero-composite headlights

Multiple headlights Multiple enclosed headlights

Front Windshield

Wipers Variable intermittent front windshield wipers

Sun visor strip Sun visor strip

Interior Lighting

Variable panel light Variable instrument panel light

Lights

Running lights Daytime running lights

Technology and Telematics

Connectivity

Handsfree Handsfree wireless device connectivity

Internet Access

Internet access Fleet Telematics Modem selective service internet access

USB Ports

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Selected Equip & Specs (cont'd)

USB ports 2 USB ports

Safety and Security

Airbags

Front impact airbag driver Driver front impact
airbag

* Number of airbags 1 airbag

Seatbelts

Height adjustable seatbelts Front height
adjustable seatbelts

Seatbelt pretensioners Front seatbelt
pretensioners

* Seatbelt pretensioners number... 1 seatbelt pre-
tensioner

Security System

Vehicle tracker Fleet Telematics Modem
vehicle tracker

Traction Control

Electronic stability control Electronic Stability
Control (ESC) electronic stability control
system



2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515 | Quote ID: End158A.25

Warranty

Standard Warranty

Basic Warranty

Basic warranty 36 months/36,000 miles

Powertrain Warranty

Powertrain warranty 60 months/60,000 miles

Corrosion Perforation

Corrosion perforation warranty 60 months/unlimited

Roadside Assistance Warranty

Roadside warranty 60 months/60,000 miles

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Amber LED Strobe Light Caged Beacon - Amber



Overview

Lifetime warranty on all emergency vehicle and strobe LED lights. 4-3/4" Amber LED

Strobe Light Beacon with protective wire cage for warning/hazard lighting. Three modes: 360 degree rotating pattern, six flashes pattern and dual flashes pattern.

12~24VDC wide input voltage range. Suitable for use on warehouse equipment such as forklifts, order pickers, and other industrial vehicles. 14.5" power wires - Materials: Polycarbonate lens, ABS mounting base. Dimensions: 5.85" x 5.85" x 4.75" with o cage, 5.85" x 5.85" x 5.463" with cage.

Applications

- Emergency Vehicles
- Farm and Agricultural Equipment
- Fleet Vehicles
- Hazard Lights
- Public Safety Vehicles
- Roadside Assistance Vehicles
- Utility Vehicles
- Warning Lights





SPORT 2.0 DRIVER SEAT

COMMERCIAL BUS / DELIVERY TRUCK

The Freedman Sport 2.0 Driver Seat is designed, tested and built to comply with all applicable FMVSS requirements. With standard recliner, 2-way adjustable lumbar and European styling, the Sport 2.0 is the ultimate in driver seat comfort and value.



features

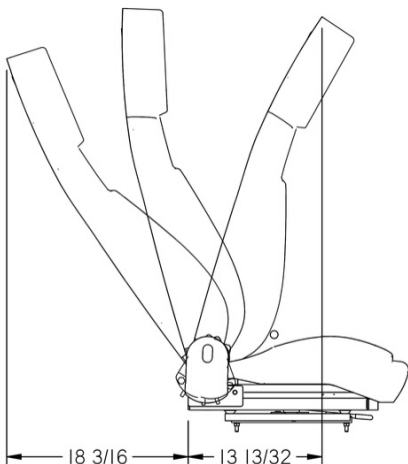
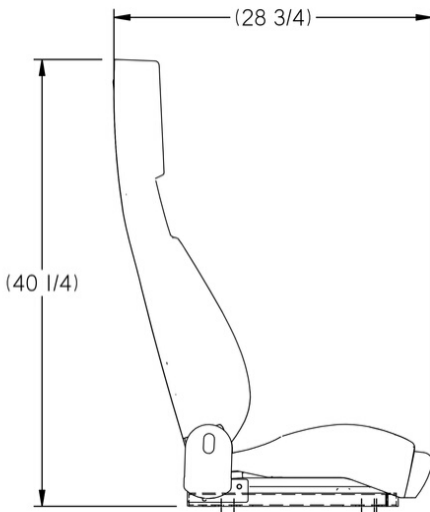
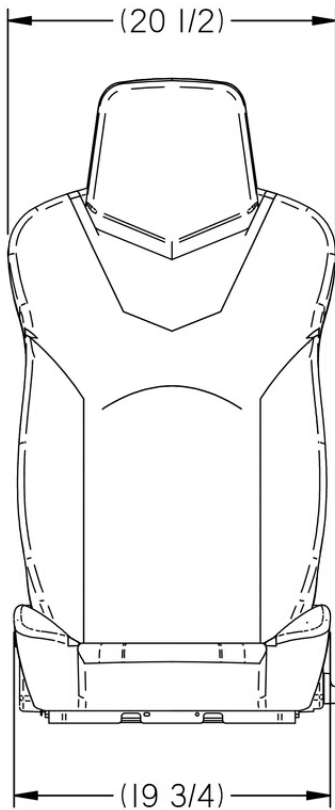
- High back design for head/neck support and pleasing aesthetics
- 2-way adjustable lumbar
- Built in headrest for comfort and style
- The highest weight rating (400 lbs.) for cutaway buses
- Standard with LH recliner lever
- Standard with Right and Left arm brackets to add armrest for driver or co-pilot vehicle positions
- Standard with adjustable lumbar support
- Hole pattern on the bottom of the seat will accommodate:
 - **Ford E-Series (Seat Delete) Cutaway**
 - **GM/Chevy G-Series Cutaway**
 - **Adnik power base**
 - **6" & 7" Slides**
 - **Tilt Riser**
- Standard with heavy-duty black flat-woven cover, easy to clean with a zippered back cover for easy change out change in the field

options

- Special order Upholstery is available in matching and performance upholstery
- Adjustable right hand armrests, molded (unupholstered) and easy to clean
- LeMans armrest features flip up and down ability for easy vehicle entry and egress
 - Durable molded foam for easy clean and long life and comfort



LeMans Armrest



FREEDMAN[®]
SEATING COMPANY

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(773) 524-2440 (800) 443-4540 Fax (773) 252-7450
freedmanseating.com | info@freedmanseating.com



Freedman Seating is committed to lessening our impact on the planet. For your convenience, materials are now available online to download at www.freedmanseating.com.



We are constantly updating and improving our seats; therefore we reserve the right to change or modify specifications or materials without notice. All Freedman Seating Company seats meet or exceed FMVS standards

NEW YORK SINCE 1907



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 level of 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 largely built in the USA. Our staff has grown to over 285 people in facilities totaling over 150,000 square feet.

As we move forward we have set our goals even higher. We are now certified to ISO-9001:2015. 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.



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CAT. NO. 06012021



AccuStyle® & EuroStyle® Series

Rearview Mirror Systems



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. (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 with rear looking camera & external LED



Available in two-point mount configuration



Heavy duty spine structure

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VISION PRODUCTS

Backup Safety Products, Cameras & Monitors

Safety Starts With a Rearview Camera

At Rosco, we believe shifting into reverse should never include guesswork or obstructed vision. With dependable automotive backup camera systems, reversing is performed with the right perspective. We build cameras that deliver clear, wide angle views that benefit drivers and employers. Rosco backup camera systems for commercial vehicles are engineered for a higher standard of vehicle vision safety. We cover all safety angles so your driver and vehicle can backup safely. Rosco backup systems with multiple camera inputs allow you to add side cameras for all-around blind spot reductions. Choose your preferred monitor type and size with features tailored to your fleet needs and operational conditions.



Complete Camera Kit



STSC106
BULLET CAM



STSC111B
REAR LOOK DOWN
OR SIDE MOUNT



STSC112
LICENSE PLATE CAM



STSC170
INTERIOR DOME CAM



STSC128
UNIVERSAL SIDE CAM

MOR-Vision® Mirror/Monitor Backup Camera Kits

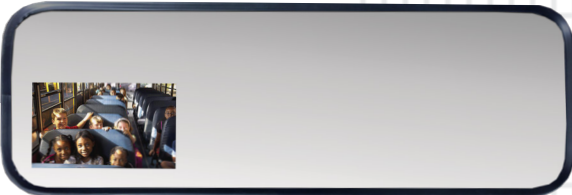


Rosco Vision Systems introduces a revolutionary new backup camera system (STSK6630) for large school buses and vehicles. This new system utilizes an interior 6” x 30” rearview mirror (STSM630) to display a 7” LCD monitor when the vehicle is in reverse operation. This monitor allows the driver to see 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.

www.roscovision.com



STSK1030 Mirror/Monitor 10” x 30” Backup Camera Kit
STSM1030 Monitor, STSC111B Camera, and STSH341 Harness



STSK6630 Mirror/Monitor 6” x 30” Backup Camera Kit
STSM630 Monitor, STSC111B Camera, and STSH341 Harness



STSK5530 Mirror/Monitor 6” x 16” Backup Camera Kit
STSM530 Monitor, STSC111B Camera, and STSH341 Harness



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

EuroStyle® 715 Series

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

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.

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.

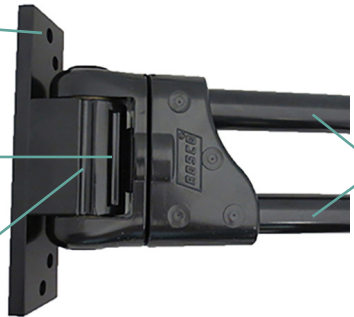
Economy models offer breakaway swivel arms, or fixed arms. Fender mount systems are available for Ford, GM, and other cutaway buses.

Spring-Break® Detent

Variety of mounting bases and hole configurations

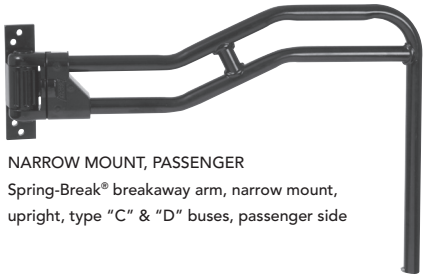
Hidden internal spring detent mechanism

Multiple custom groove locations for variable detent angles

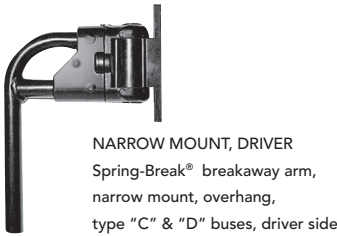


Tubular construction for strength, custom length and hidden wiring

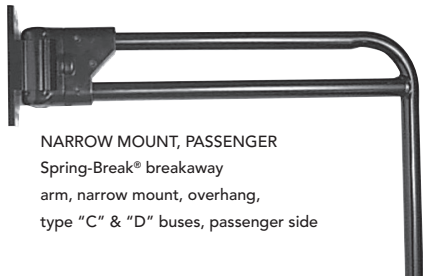
OFFSET MOUNT, DRIVER
Spring-Break® breakaway arm, offset mount, upright, type "C" & "D" buses, driver side



NARROW MOUNT, PASSENGER
Spring-Break® breakaway arm, narrow mount, upright, type "C" & "D" buses, passenger side



NARROW MOUNT, DRIVER
Spring-Break® breakaway arm, narrow mount, overhang, type "C" & "D" buses, driver side



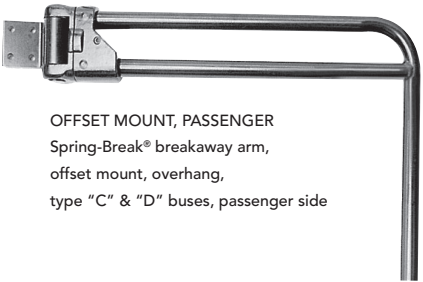
NARROW MOUNT, PASSENGER
Spring-Break® breakaway arm, narrow mount, overhang, type "C" & "D" buses, passenger side



TYPICAL GM PATCH MOUNT, DRIVER



TYPICAL FORD PATCH MOUNT, DRIVER



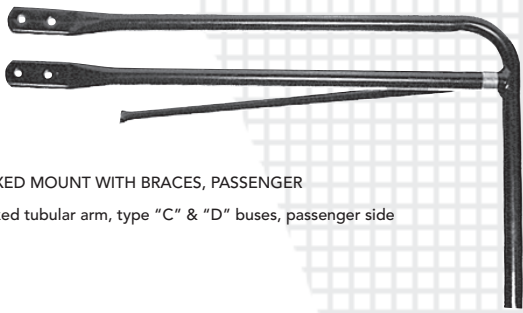
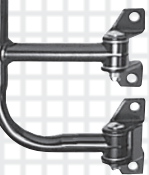
OFFSET MOUNT, PASSENGER
Spring-Break® breakaway arm, offset mount, overhang, type "C" & "D" buses, passenger side

Swivel and Fixed Mount Arms

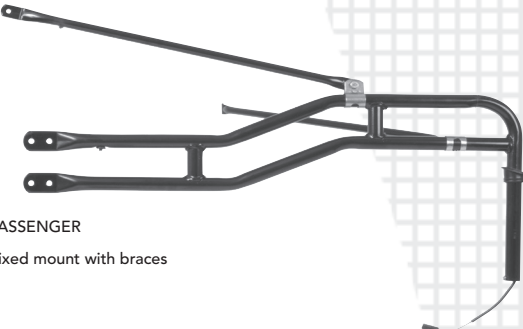


TYPICAL FORD PATCH MOUNT®, DRIVER

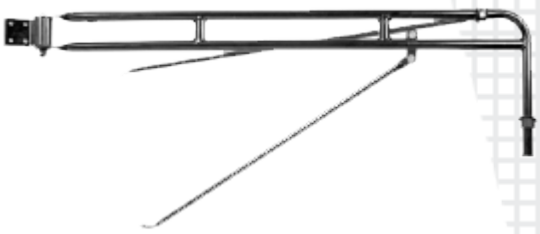
TUBULAR SWIVEL MOUNT, DRIVER
Tubular non-detent breakaway arm with dual swivel mount, type "C" & "D" buses, driver side



FIXED MOUNT WITH BRACES, PASSENGER
Fixed tubular arm, type "C" & "D" buses, passenger side



PASSENGER
Fixed mount with braces



TYPICAL PASSENGER OVERHANG ARM ASSEMBLY

FEATHER WEIGHT

**MID-HI SEAT
"ROCK SOLID"**



Sustainable Seating Solutions

Freedman Seating Company's Feather Weight seats are designed to be like feathers on a bird: light and airy to satisfy weight restrictions and ensure a smooth ride, yet durable for years of service and low maintenance.

Freedman Seating Feather Weight seats are the most severely tested in the company's history, and meet all applicable federal motor vehicle safety standards for strength and safety (including 210 for seat belts).

Less weight means one thing to bus builders and operators: they can get more passengers per bus.

And when we say more passengers, ***we mean more happy passengers.***



Not Just Seats



Seating Solutions™

THE FEATHER WEIGHT SERIES BY

FREEDMAN
SEATING COMPANY

an ISO 9001:2000 certified company

FEATHER WEIGHT

MID-HI SEAT "ROCK SOLID"



Sustainable Seating Solutions

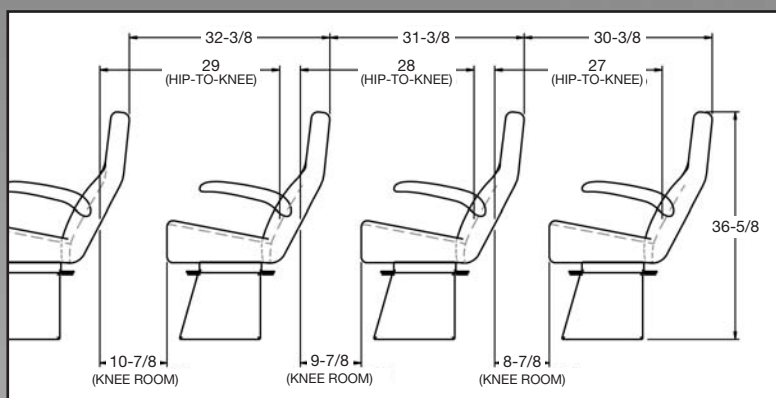
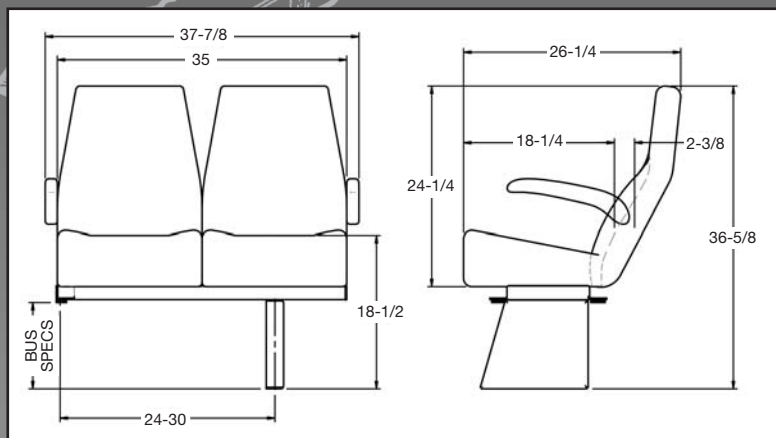
Whether your bus is for tour/charter, para-transit, or shuttle, Feather Weight Mid-Hi works for you. Optional adjustable headrests and reclining back-rests give you luxuries for long journeys, while grab rails and ABS plastic backs provide the function and safety required for shorter trips. The ultra-thin backrest gives outstanding support and creates more hip-to-knee room than any other seat in its class. The steel frame system meets or exceeds all applicable government standards for safety and durability. And, it's light as a feather!

Feather Weight Mid-Hi features include:

- An ultra-thin *Knee-Saver* type backrest for added hip-to-knee room and lumbar support
- Molded polyurethane seat and back cushions for comfort and long lasting support
- 17½" wide seat cushions
- 22½" back height off the seat cushion, 37" off the floor
- Wire mesh-grid seat springs for even support
- FMVSS 210 compliance—all *Feather Weight* seats are seat belt ready
- Transit style—rigid backrests (starting weight without options—43 lbs.)
- Touring style—reclining backrests (starting weight without options—47 lbs.)
- Covers that can be removed and replaced easily and without the use of special tools

Feather Weight Mid-Hi options include:

- Black molded *U.S. Arms* or upholstered flip-up armrests
- Adjustable headrests
- Black or yellow corner AV grab rails
- Black or yellow top AV grab rails
- ABS plastic backs
- Mesh map pockets
- Vertical stitching
- FTA foam
- Snack trays
- Aluminum folding footrests
- Pillow seat cushions
- Rear row quick disconnect
- Side sliders
- 16", 18" or 19" wide seats available
- Rigid or reclining backrests
- Seat belts
 - Non-retracting seat belts
 - Retracting seat belts
 - USR (Under Seat Retractors)
- S3 Bio-Cushions (Made with vegetable oil)
- A wide variety of cloths and vinyls
- S3 cloths (Made with recycled yarn)



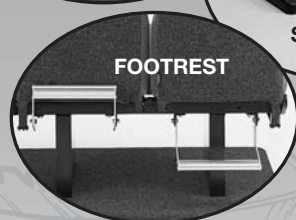
OPTIONS



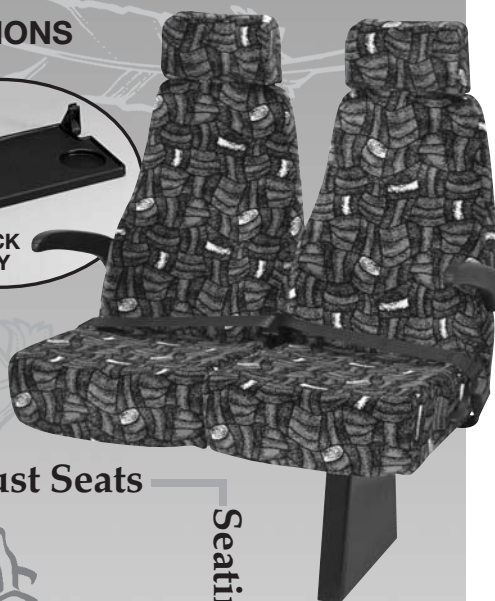
PILLOW SEAT



SNACK TRAY



FOOTREST



Not Just Seats



Seating Solutions™

FREEDMAN
SEATING COMPANY

an ISO 9001:2000 certified company

4545 W. Augusta Blvd., Chicago, IL 60651
(773) 524-2440 (800) 443-4540 Fax (773) 252-7450
e-mail: sales@freedmanseat.com
WWW.FREEDMANSEATING.COM

We are constantly updating and improving our seats; therefore we reserve the right to change or modify specifications or materials without notice. All Freedman Seating Company seats meet or exceed FMVSS standards.

ISO 9001:2000 registered

FEATHER WEIGHT

FOLDAWAY BV & AM STYLES

Freedman Seating gives you the largest selection of Foldaways in the industry. Whether you need space for luggage or wheel chairs, we have the right seat. Easy to install and easier to operate, our Foldaways will provide you with miles and miles of happy riders and drivers. Maybe we should say, "smiles and smiles". Freedman Seating, "Not just seats — seating solutions."



Notch-Back, standard Bench-Back and High-Back are shown.

Not Just Seats



THE FEATHER WEIGHT SERIES BY

FREEDMAN

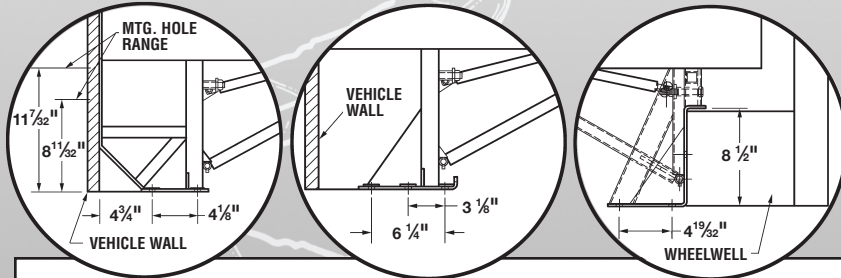
SEATING COMPANY

an ISO 9001:2000 certified company

Seating Solutions™

FEATHER

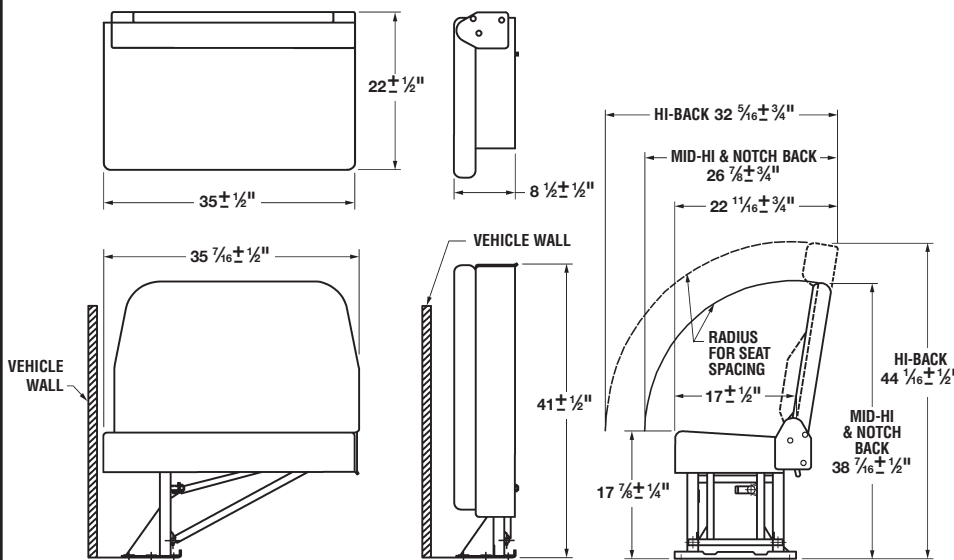
Foldaway BV & AM STYLES



AM2 Floor/Wall Mount

BV Floor Mount

BVWW3 Floor Mount



Corner Grabs

TDSS with belts

TDSS without belts



Belts not included.

Standard Features:

- BV Foldaways mount to the vehicle with four bolts to the floor (no wall mount)
- AM Foldaways mount to the vehicle with four bolts to the floor and two to the wall mount
- Seat belt ready (FMVSS 210 compliant with no leg or tether)
- Ultra-thin backrest for added hip-to-knee room and lumbar support
- High quality molded polyurethane seat and back cushions

- Folds up to less than 10" thick when in the stowed position
- Cantilever design provides reduced installation time; no floor cutting for aisle leg and easy vehicle clean up
- Wire mesh grid seat springs for even support
- 2 locking mechanisms to hold seat in stowed position

Options:

- Single or double seats
- Bench back, notch back or high back
- Wheel well seats
- Wide variety of vinyl's or cloths
- Molded U.S. arms or upholstered arms
- Black or yellow top grabs (not on high backs)
- Black or yellow corner grabs (black side only on high back)
- Vertical stitching
- FTA foam
- ABS backs (Notchback only)
- Adjustable headrests (Single and Notchback only)
- Shrouds to cover the Foldaway when stowed
- USR seat belts (Under Seat Retractors)
- CRS-225 hooks and tethers
- TDSS (Tie Down Storage System)

Not Just Seats



THE FEATHER WEIGHT SERIES BY

FREEDMAN
SEATING COMPANY

an ISO 9001:2000 certified company

4545 W. Augusta Blvd., Chicago, IL 60651
(773) 524-2440 (800) 443-4540 Fax: (773) 252-7450
WWW.FREEDMANSEATING.COM
e-mail: sales@freedmanseat.com

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Seating Solutions™

FEATHER

FLIP SEATS



Mid-Hi shown



Mid-Hi shown

Available with SplitFlip option

WEIGHT

Feather Weight Flip Seats have everything you would expect in a fixed seat: comfort, strength, style and value, with none of the compromises you expect in a flip seat. Designed to take advantage of every inch of bus space, the angle of the backrest can be adjusted for either forward facing or aisle facing configurations. The seat cushion locks in both the up or down position, and is easily released with just the pull of one lever. And like all Freedman Seating Feather Weight Seats, they meet all applicable Federal Motor Vehicle Standards for strength and safety (including 210 for seat belts). You'll flip for these seats!

Not Just Seats

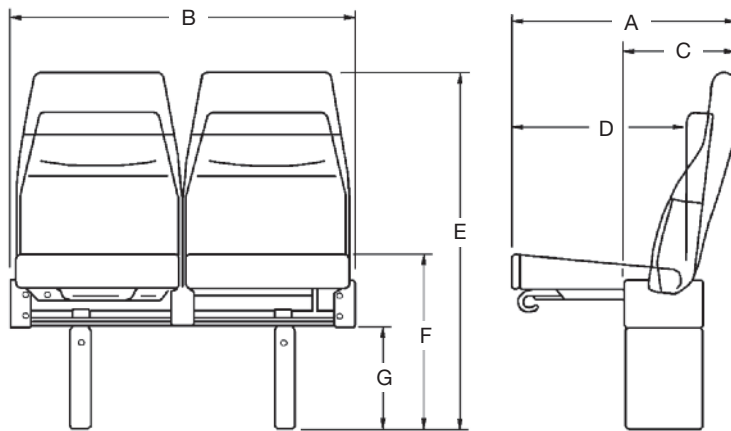


Seating Solutions™

THE FEATHER WEIGHT SERIES BY
FREEDMAN
SEATING COMPANY

FEATHER

WEIGHT



MODEL	A	B	C	D	E	F	G
Single Mid-Hi Flip Seat	24–25%	18 ³ / ₁₆	11 ¹ / ₁₆ –13 ³ / ₁₆	18	36%	18	10%
Double Mid-Hi Flip Seat	24–25%	36%	11 ¹ / ₁₆ –13 ³ / ₁₆	18	36%	18	10%
3 Place Mid-Hi Flip Seat	24–25%	53 ¹ / ₄	11 ¹ / ₁₆ –13 ³ / ₁₆	18	36%	18	10%
Double Lo-Back Flip Seat	20 ³ / ₁₆ –21 ¹⁵ / ₁₆	36%	9 ¹ / ₄	17 ¹ / ₂	33%	18%	10%
Triple Lo-Back Flip Seat	22%	54 ³ / ₁₆	10 ¹⁵ / ₃₂	16	33 ³ / ₄	18 ⁵ / ₁₆	10%

All sizes in inches.

FLIP SEATS

Freedman Feather Weight Flip Seats give your riders comfort and style where they never expect it—a flip seat! Available as a single, double, or triple, the seats can be ordered with grab rails, flip arms, ABS plastic backs, or more. The seat cushion locks in both the up or down position and is protected by an attractive ABS trim piece when folded up.

Standard features

- Knee Saver style backrest providing increased hip-to-knee room, lumbar support, and back angle adjustment
- High quality polyurethane seat and back cushions for comfort and long lasting support
- Flex-o-lator grid seat springs for even support
- Positive locks to hold seat cushion up or down
- Bolt-on legs that are infinitely adjustable
- An ABS trim piece to protect the bottom of the seat, with a molded-in handle

Options

- Low-Back, Mid-Hi and High-Back options
- Black molded U.S. Arms or upholstered flip-up arms
- Top and corner grab rails (black or yellow)
- ABS plastic backs (Mid-Hi only)
- Mesh map pockets
- Vertical stitching
- FTA foam
- Adjustable headrests (Mid-Hi only)

Not Just Seats



Seating Solutions™

THE FEATHER WEIGHT SERIES BY

FREEDMAN
SEATING COMPANY

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(773)524-2440 (800)443-4540 Fax (773)252-7450
WWW.FREEDMANSEATING.COM
e-mail: sales@freedmanseating.com
ISO 9001:2008 registered

We are constantly updating and improving our seats; therefore we reserve the right to change or modify specifications or materials without notice. All Freedman Seating Company seats meet or exceed FMVS standards.

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) – Two (2) years

Cover Warranty is for defects in the material or sewing and is limited to replacement covers. It does not include labor:

- One (1) year for Level #1 in-stock FSC material and perforated vinyl
- Two (2) year for Level #3 in-stock FSC material and higher
- No warranty for COM (Customer Own/ supplied Material)

The warranty period begins at time of sales to customer or 180 days after shipment from the Freedman Seating Company's factory to the customer, whichever occurs first.

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, 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 are 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 onsite 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 instructions, as well as recommended service intervals with each seat. 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.

TARABUS DESIGN

FLOORING FOR BUS & COACH INTERIORS



DESIGN MEETS PERFORMANCE

Gerflor[®]
theflooringgroup



TARABUS DESIGN

FLOORING FOR BUS & COACH INTERIORS

The **TARABUS** range of floorings has been especially designed for Bus & Coach applications. High product quality and innovative designs have made **TARABUS** the market leader in this sector.

GERFLOR continue to innovate in order to satisfy the market demand for enhanced vehicle interiors.

WHEN TECHNOLOGY MEETS EXPERTISE

Incorporating the use of the latest digital printing technology along with Gerflor historical expertise, we are pushing the boundaries of the bus flooring standards with the **TARABUS Design**.

The **TARABUS Design** is a digitally printed flooring especially designed to meet the most stringent requirements of the Bus & Coach industry. With this world first from **GERFLOR**, Design meets Performance.





By choosing **TARABUS Design**, you are choosing the new benchmark in Bus & Coach flooring.

Gerflor[®]

TARABUS DESIGN PRODUCT RANGE

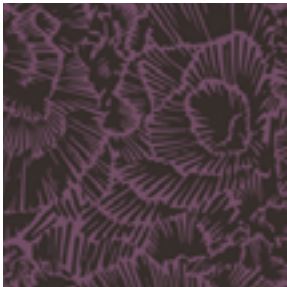


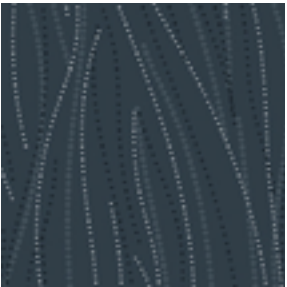
The **TARABUS Design** range consisting of 6 innovative patterns, each offered with two refined colours will give you the possibility to create the look you would like to make your vehicle more attractive, enhancing the customer experience. Furthermore, if you can't find the right colour, custom colours can be easily developed by our design team.

URBAN







SKYLINEDISTRICT

ORGANIC



WAVESREEF

GRAPHIC




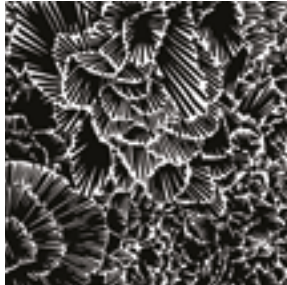

HEXACUBISM

6 PATTERNS • 12 COLOURS

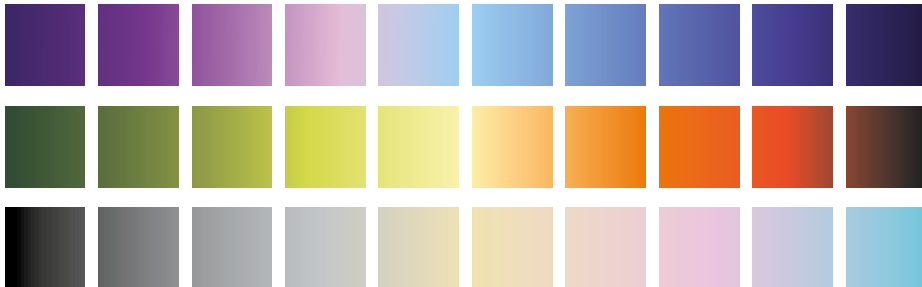
CUSTOMIZE AN EXISTING PATTERN

All the patterns are also available with your selection of colours


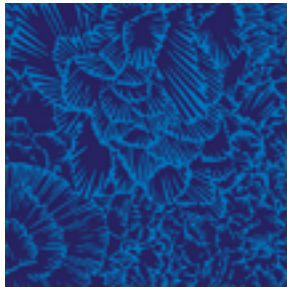

1 Select your pattern



2 Choose your colours



3 Order your unique floor



DIGITALLY-PRINTED FLOORING

My Tarabus

DESIGN YOUR OWN FLOORING

Have you ever thought how to enhance your design by an entirely bespoke way forward to reflect the personality of your company or branding ? Well, now you can, with **Digitally-Printed Flooring.**

A WORLD FIRST FROM GERFLOR.

Your passengers could be walking on just about any surface you can imagine, each enhancing the customer experience, making your vehicles more attractive, adding value to your brand or promoting the identity of your city.

Totally unique to you.



Minimum order quantity > 1 500 m²

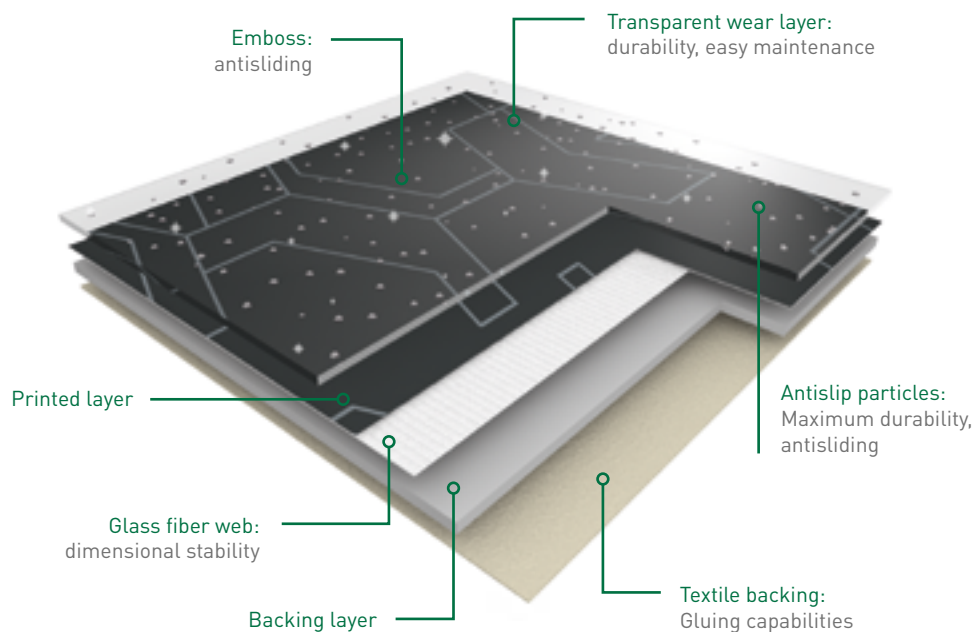
IMAGINED BY OUR CUSTOMERS



THE ONLY REAL LIMIT
IS YOUR **IMAGINATION**



TARABUS DESIGN TECHNICAL DATA



• Roll width		200 cm (+1. -0 cm)
• Roll length		24 lm
• Thickness	ISO 24 346 : 2012	2.25 ± 0.15 mm
• Weight per m²	ISO 23 997 : 2012	2.55 ± 0.15 kg/m²
• Dimensional stability	ISO 23 999 ASTM D 1204 : 2014	≤ 0.3 %
• Abrasion resistance	ISO 9352 (TABER) : 2012	≤ 300 mg
• Slip resistance	DIN 51130 : 2014 ASTM D 2047 : 2017	R10 ≥ 0.6
• Indentation test	ISO 24 343-1 : 2012	≤ 0.2 mm
• Low temperature resistance	D 42 1235 A	- 20°C
• Phonic insulation	ISO 717/2 : 2013	≥ 5 dB
• Colour fastness	ISO 105 B02 : 2014 method 3	≥ 6
• Fire resistance	ISO 3795 : 1990 FMVSS 302 ASTM E 647 : 2019 R 118-03	0 mm/mn Conform Class 1 Conform
• Chemical agent resistance	ISO 26 987 : 2012	Unaffected by diluted acids and bases Unaffected by domestic products Excluding solvents for plasticized PVC

THE COMPLETE FLOORING SOLUTION

GERFLOR continue to support you with a full range of technical solutions to enhance your installation efficiencies:

TARABUS Design is available in:

Kit System

Back WELDING

TARABUS Self-Adhesive

TARABUS DESIGN PART NUMBERS

FLOOR COVERINGS						WELDING RODS	
						CR 50	CA 72
SKYLINE	NEW YORK	6798	200 cm x 24 lm	NT	782A6798	H0092967	H0072967
	TOKYO	6014	200 cm x 24 lm	NT	782A6014	H0090451	H0070451
DISTRICT	BROOKLYN	8509	200 cm x 24 lm	NT	782A8509	H0092969	H0072969
	PICCADILLY	3434	200 cm x 24 lm	NT	782A3434	H0092968	H0072968
WAVES	BELHARRA	5716	200 cm x 24 lm	NT	782A5716	H0092970	H0072970
	NAZARE	5715	200 cm x 24 lm	NT	782A5715	H0090232	H0070611
REEF	BELIZE	8618	200 cm x 24 lm	NT	782A8618	H0092252	H0072252
	MALDIVES	8581	200 cm x 24 lm	NT	782A8581	H0092568	H0072568
HEXA	CELL	8632	200 cm x 24 lm	NT	782A8632	H0092969	H0072969
	HONEYCOMB	8095	200 cm x 24 lm	NT	782A8095	H0092252	H0072252
CUBISM	KLEE	8644	200 cm x 24 lm	NT	782A8644	H0092969	H0072969
	MONDRIAN	4530	200 cm x 24 lm	NT	782A4530	H0092252	H0072252



Convenient Center Panel Design

The E-Series multifunction center panel includes ergonomic controls, providing easy access to functions as well as beverage holders and storage trays.

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515



Client Proposal

Prepared by:

Mark Prohaska

Office: 641-923-2855

Quote ID: End158A.25

Date: 05/28/2024



Pritchard Commercial Sales | 1400 South 24th Street Suite B, Clear Lake, Iowa, 50428

Office: 641-923-2855



2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515 | Quote ID: End158A.25

Warranty

Standard Warranty

<i>Basic Warranty</i>	
Basic warranty	36 months/36,000 miles
<i>Powertrain Warranty</i>	
Powertrain warranty	60 months/60,000 miles
<i>Corrosion Perforation</i>	
Corrosion perforation warranty	60 months/unlimited
<i>Roadside Assistance Warranty</i>	
Roadside warranty	60 months/60,000 miles

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



CENTURY SERIES NCL1000-2 WHEELCHAIR LIFTS

THE ONE-STOP-SHOP FOR ALL YOUR MOBILITY TRANSPORTATION NEEDS

Since 1963, BraunAbility® has been the trusted industry leader. Our wheelchair accessible vehicles and lifts are designed to meet your specific needs, with performance, safety, and reliability that will keep your fleet up and running day after day, year after year. With the most diverse product portfolio of any mobility vehicle company in the industry, BraunAbility delivers the right solution to every commercial mobility need.

NCL1000-2 CENTURY SERIES WHEELCHAIR LIFT

STANDARD FEATURES

- **1,000-pound lifting capacity**
- NHTSA-compliant
- Fully automatic FMVSS 403-compliant lift, operated by an attendant
- Interfaces with OEM interlocks
- Long-lasting LED lift-mounted lights
- Side or rear door application*
- Platform options up to 37" wide
- Floor to ground lift heights up to 48"
- Made in the USA

* Vehicle suspension dynamics affect body roll and FMVSS 404 platform tilt allowance. Before selecting a lift with a 1000# rated capacity, ensure this load does not induce excessive platform tilt.

SAFETY FEATURES

- Locking mechanical Inboard Barrier (IB), powder coated yellow for safety and high visibility, prevents operation if occupied
- Visual and audible warnings alert both passengers and attendants to unsafe conditions
- Interlocked gas spring activated outer barrier
- Dual handrails for security and convenience
- Pump design prevents platform folding when occupied

EASE OF USE FEATURES

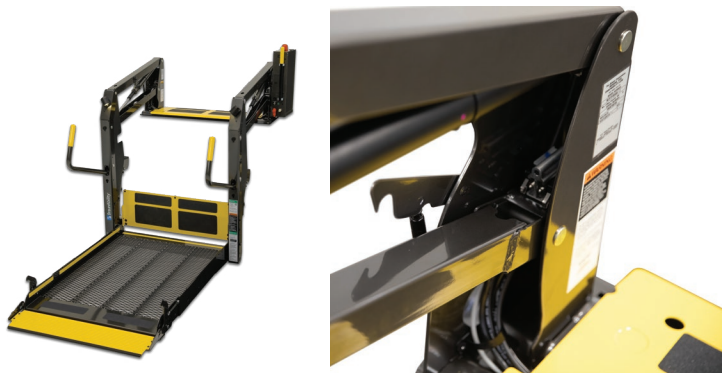
- Hand-held control box with illuminated functions
- Durable redesigned baseplate reduces lift weight, and allows for quicker and easier service
- Bridging feature permits the wheelchair user to board the lift from sidewalks
- Equipped with an adjustable anti-rattle feature
- Lift-Tite™ system stows the lift platform securely while the vehicle is in transit
- Pump module with removable cover offers easy access to all components
- Integrated back-up pump

BRAUNABILITY'S UNRIVALED SERVICE

Every BraunAbility® commercial mobility product comes with our team of commercial mobility experts. They will work to find the ideal mobility transportation solution, no matter the requirements, complexity, or scale. And after you make a purchase, they will continue to work just as hard to offer you all the service and repair support you need.

The NCL1000-2 Century Series Wheelchair Lift from BraunAbility

With dual hydraulic lift arms, and a design that has withstood the test of time, the Century Series offers all the benefits and quality of a BraunAbility wheelchair lift in a streamlined, economical package. The simplified electrical system offers trouble-free operation, while the non-hydraulic spring-loaded outer barrier keeps the wheelchair safely and securely on the wheelchair lift platform throughout the lifting cycle. In addition to all these standard features, the NCL1000-2 also comes equipped with an increased lifting capacity of 1000 pounds.



The NCL1000-2 Century Series also features new and improved inboard barriers, baseplates, vertical channels, and lower parallel arms for a more rigid and stable ride.

BraunAbility offers several models of the Century 2 Wheelchair Lift to address the right application, including usable platforms of 33" x 51", 34" x 51", 34" x 54", as well as 37" x 51" and 37" x 54". The models also vary based on the placement of the front or rear pump module, the lifting capacity (1,000 pounds), and the overall floor-to-ground lift height (up to 48"). The Century 2 Wheelchair Lift is available with or without the handrail belt. See your BraunAbility dealer or braunability.com for lift models available for your specific application.



MADE IN THE USA

631 West 11th Street • Winamac, IN 46996
(574) 946-6153 | 1-800-THE-LIFT
www.braunability.com/commercial

All illustrations, descriptions and specifications in this brochure are based on the latest product information at the time of publication. BraunAbility reserves the right to make changes at any time without notice. © 2019 The Braun Corporation 405245

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. 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. The cost of labor for any repair or replacement in the second and third year of warranty coverage is the sole responsibility of the owner. This warranty does not cover labor costs in the second or third year of coverage.

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 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.

Braun® Limited Warranty

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 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 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.

Braun® 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.

QRT[®]-1 SERIES



MAX / DELUXE / STANDARD
4-POINT SECUREMENT
WHEELCHAIR RETRACTORS



QRT[®]-1 SERIES

The Securement System That Changed Everything

The original 4-point wheelchair securement system, QRT-1 Series retractors defined the way passenger safety devices are designed and tested.

With a range of 3 different options to fit every need and every budget, the QRT-1 Series of retractors offer easy to use, effective 4-Point securement of wheelchairs for virtually any vehicle application.



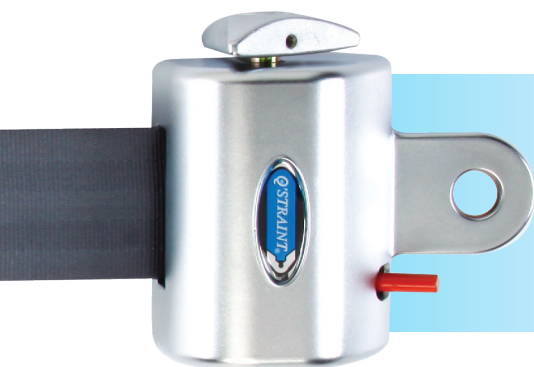
QRT MAX

FULLY AUTOMATIC, premium knobless retractor that allows for one-handed operation.



QRT DELUXE

SELF-LOCKING & SELF-TENSIONING retractor with ergonomic housing and dual tensioning knobs.



QRT STANDARD

SEMI-AUTOMATIC retractor that meets all industry standards and specifications.



More than 30 years ago, Q'STRAIT introduced the world's first fully integrated 4-Point wheelchair passenger securement system, now an industry standard the world over.

The QRT line of retractors are the linchpin of that system.



Every QRT retractor is fully ADA complaint, and meets or exceeds all standards and regulations, including:

- SAE J2249, ISO 10542,
- FMVSS 209, 302, 210, 222
- CMVSS 209
- CSA Z605
- and 30mph/20g crash testing

Anchorage Options

All QRT-1 Series Retractors are compatible with L-Track, L-Pockets and Slide 'N Click anchorages, or may be directly mounted to vehicle floors, seat legs or barriers.



L-TRACK / L-POCKETS

For kits that use L-Track or L-Pocket anchorages, QRT Series retractors feature our patented Positive Lock Indicator (PLI) that clearly indicates when the fitting is locked in the anchorage.

SLIDE 'N CLICK

For kits that include Slide 'N Click anchorages, QRT Series retractors feature a single-bolt SNC assembly and plunger that allows a full 360° rotation, eliminating anchorage alignment guesswork.

QRT-1 SERIES FEATURES COMPARISON

	MAX	DLX	STD	
Knobless, One-Handed Operation. No knobs to interfere with wheels and footrests.	●			
Dual Tensioning Knobs. Provides additional tensioning if needed.		●		
Single Tensioning Knob. Provides additional tensioning if needed.			●	
Automatic, Self-Locking. Allows easy, one-handed hook-up.	●	●		
Self-Tensioning. Retractors automatically take up 'slack'.	●	●		
Positive Lock Indicator. Patented feature clearly indicates when fitting is locked in anchorage.	●	●	●	
Interchangeable. Eliminates confusion: no right, left, front or rear locations.	●	●	●	
Low Profile & Compact. Elimination of mounting bracket allows retractors to fit under most footrests.	●	●	●	
Accommodates Larger Wheelchairs. Reduced overall length leaves more room for wheelchairs.	●	●		
Ultra-Durable. Hardened steel and coated zinc for maximum corrosion resistance.	●	●	●	
Universal Design. Accommodates virtually all wheelchair designs, including scooters.	●	●	●	
J-Hook. Reduces twisting of belts and ensures proper securement for all wheelchair designs.	●	●	●	
Foot Release Lever. Easy release eliminates the stress of bending down.	●	●	●	



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PRODUCT LIMITED WARRANTY

Q'STRAIT provides limited warranty coverage on Q'STRAIT products (the "Products") as described in this Limited Warranty. For customers in the U.S.: this warranty gives you specific legal rights; you also may have other rights, which vary from state to state. For customers in the European Union: the purchaser may have additional legal rights under applicable national legislation governing the sale of consumer goods, and those rights (if applicable) are not affected by this warranty.

COVERED PRODUCTS AND LIMITATIONS:

Q'STRAIT's limited warranty coverage applies only to factory defects in materials and workmanship in the Products as follows:

- **QUANTUM** – 3 years* or 10,000 cycles.
- **Q'POD, Q'STRAIT ONE, QRT-3 Series, QRT-5 Series** – 5 years* limited warranty coverage.
- **QRT Max, QRT Deluxe, QLK-150, Q'UBE** – 3 years* limited warranty coverage.
- **QRT Standard, Q-5000, M-Series, QLK-110, INQLINE, INQLINE Loader** – 2 years* limited warranty coverage.
- **OMNI Floor** – 3 years/40,000 mile* limited warranty coverage.
- **All other Products** – 1 year limited warranty coverage.

***Only valid if product is registered with Q'STRAIT.** Otherwise a 1 year limited warranty applies to all products.

Each of the warranty coverage periods runs from the date the Products are shipped from Q'STRAIT, and applies only to warranted defects that first manifest themselves and are reported to Q'STRAIT within the applicable warranty period. Q'STRAIT retains the right to determine to its reasonable satisfaction whether any claimed defect is covered by this warranty.

CERTAIN ITEMS ARE EXCLUDED FROM WARRANTY COVERAGE BY Q'STRAIT, AND THIS LIMITED WARRANTY COVERAGE DOES NOT APPLY TO:

1. Products which are not installed and maintained in accordance with Q'STRAIT's instructions.
2. Products which are subject to misuse, abuse, accident, negligence, or exposure to the elements or chemicals.
3. Products which are altered or not repaired by a Q'STRAIT authorized repair service.
4. Normal wear and tear, and routine maintenance.
5. Products which are not used in applications or in a manner approved by Q'STRAIT.

ALL STATUTORY OR IMPLIED WARRANTIES (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), CONDITIONS AND GUARANTIES ARE EXCLUDED AND DISCLAIMED TO THE FULLEST EXTENT ALLOWED BY LAW. If any implied warranties, conditions or guarantees are required under applicable law, they are limited to the minimum duration allowed by law (not longer than the duration of the applicable express limited warranty coverage). For customers in the U.S.: some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

REMEDIES UNDER THIS LIMITED WARRANTY

If a defect covered by this warranty occurs, Q'STRAIT (or one of its authorized dealers, as determined by Q'STRAIT) will repair or replace the defective Products, in its sole discretion. This "repair or replacement" remedy is the **exclusive remedy** under this warranty. Q'STRAIT has **no responsibility or liability for any incidental or consequential damages**, such as loss of use, interest or finance charges, the cost of repairs by unauthorized repair services, depreciation, etc., all of which are specifically **excluded and disclaimed** from this warranty. For customers in the U.S.: 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.

RESPONSIBILITY OF PURCHASER

1. Any claims under this limited warranty must be made to Q'STRAIT within fifteen (15) days after the defect first arises.
2. The Products must be returned to Q'STRAIT (or its authorized repair facility, as determined by Q'STRAIT) within the warranty period for inspection and warranty service. The expense of disassembly, returning the Products for warranty service, and of returning the Products to the owner and reassembly after any warranty service has been completed, is the responsibility of the owner and will not be reimbursed by Q'STRAIT. Contact Q'STRAIT Customer Service for information on how to return Products.
3. If your Product includes a registration form it must be returned to Q'STRAIT within thirty (30) days after the Products are delivered to the purchaser.

Q'STRAIT reserves the right to improve its products through changes in design or materials without being obligated to the owners of other Products.

Q'STRAIT may be contacted at **800-987-9987** or via email at customersatisfaction@qstraint.com.

QRT[®]-1 SERIES



MAX / DELUXE / STANDARD
4-POINT SECUREMENT
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The Securement System That Changed Everything

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QRT MAX

FULLY AUTOMATIC, premium knobless retractor that allows for one-handed operation.

More than 30 years ago, Q'STRAIT introduced the world's first fully integrated 4-Point wheelchair passenger securement system, now an industry standard the world over.

The QRT line of retractors are the linchpin of that system.



Every QRT retractor is fully ADA complaint, and meets or exceeds all standards and regulations, including:

- SAE J2249, ISO 10542,
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- CSA Z605
- and 30mph/20g crash testing

Anchorage Options

All QRT-1 Series Retractors are compatible with L-Track, L-Pockets and Slide 'N Click anchorages, or may be directly mounted to vehicle floors, seat legs or barriers.



L-TRACK / L-POCKETS

For kits that use L-Track or L-Pocket anchorages, QRT Series retractors feature our patented Positive Lock Indicator (PLI) that clearly indicates when the fitting is locked in the anchorage.

SLIDE 'N CLICK

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QRT-1 SERIES FEATURES COMPARISON

	MAX	DLX	STD	
Knobless, One-Handed Operation. No knobs to interfere with wheels and footrests.	●			
Dual Tensioning Knobs. Provides additional tensioning if needed.		●		
Single Tensioning Knob. Provides additional tensioning if needed.			●	
Automatic, Self-Locking. Allows easy, one-handed hook-up.	●	●		
Self-Tensioning. Retractors automatically take up 'slack'.	●	●		
Positive Lock Indicator. Patented feature clearly indicates when fitting is locked in anchorage.	●	●	●	
Interchangeable. Eliminates confusion: no right, left, front or rear locations.	●	●	●	
Low Profile & Compact. Elimination of mounting bracket allows retractors to fit under most footrests.	●	●	●	
Accommodates Larger Wheelchairs. Reduced overall length leaves more room for wheelchairs.	●	●		
Ultra-Durable. Hardened steel and coated zinc for maximum corrosion resistance.	●	●	●	
Universal Design. Accommodates virtually all wheelchair designs, including scooters.	●	●	●	
J-Hook. Reduces twisting of belts and ensures proper securement for all wheelchair designs.	●	●	●	
Foot Release Lever. Easy release eliminates the stress of bending down.	●	●	●	



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Email: info@tramanco.com.au

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2. Products which are subject to misuse, abuse, accident, negligence, or exposure to the elements or chemicals.
3. Products which are altered or not repaired by a Q'STRAIT authorized repair service.
4. Normal wear and tear, and routine maintenance.
5. Products which are not used in applications or in a manner approved by Q'STRAIT.

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Q'STRAIT may be contacted at **800-987-9987** or via email at customersatisfaction@qstraint.com.

Vulcan™ Series V1284HC Mobile DVR

12-CHANNEL MDVR

DIMENSIONS

- Height: 5.0 inches
- Width: 7.72 inches
- Depth: 12.60 inches
- Weight: 6.61 pounds

TWELVE (12) A/V INPUTS

- (8) HD channels 1080P + (4) IP channels up to 1080P

VIDEO OUTPUTS

- 2 channels

AUDIO OUTPUTS

- 2 channels, CVBS and VGA

CAMERA COMPATIBILITY

- (8) HD channels up to 1080P + (4) IP channels up to 1080P

STORAGE MEDIA

RECORDING MEDIUM

- Supports 3.5" hard disk up to 14TB and one (1) SD card slot

CAPACITY

- Up to 14TB

RECORDING OPTIONS

- SD card slot for redundant recording

INTERFACE

CAMERA CONNECTION

- (4) RJ45 IP camera connections
- (8) 4 Pin HD camera connections

NETWORK DATA CONNECTION

- Ethernet: RJ45 x 1 (10/100 M/1000M)
- IPC Ethernet: RJ45 (4x10/100M, PON Power Supply)

EXPANSION

- RS232 x 1, RS485 (for RFID and iPanel) CAN x 2

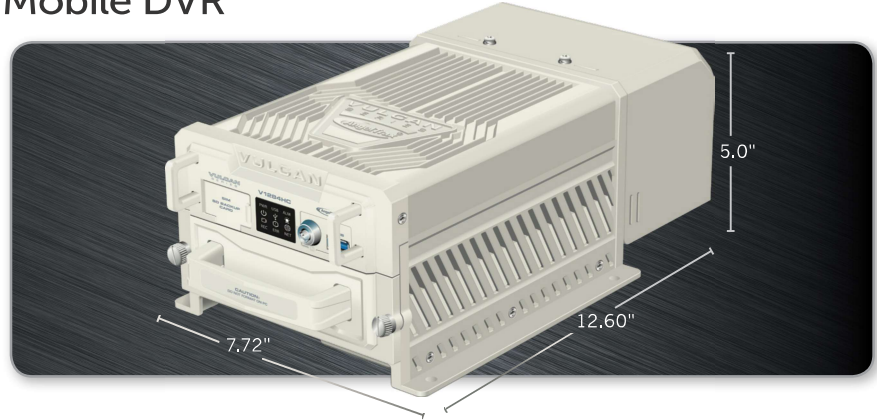
GPS INTERFACE

- Built-in, compatible with optional passive or active GPS antenna

DRIVER ACTION DETECTION

PANIC BUTTON

- The remote status indicator (panic button) can be connected to show MDVR 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

COMPRESSION FORMAT

- Video: H.264/H.265
- Audio: ADPCM, G.711U

RECORD RESOLUTION

DIGITAL

- Parallax View™ (horizontal resolution exceeds cinema 4K), 4MP (4192X1360), 1080P (1920X1080), 720P (1280X720) @30FPS

NTSC

- 1080P, 720P, WD1(928X480), WHD1(928X240), WCIF(464X240), D1(704X480), HD1(704X240), CIF(352X240)
- 8x720P@30FPS (HD) + 4x1080P@30FPS (IP) OR 8x1080P@10FPS (HD) + 4x1080P@30FPS (IP)

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 TEMPERATURE

- -40°F (-40°C) ~ 158°F (70°C) with heater or 14°F (-10°C) ~ 158°F (70°C)

OPERATING HUMIDITY

- 15% - 95%

BUILT-IN G-FORCE SENSOR

BUILT-IN WI-FI MODULE

BUILT-IN POWER PROTECTION

BUILT-IN GPS MODULE (REQUIRES ANTENNA)

POWER SUPPLY

INPUT RANGE

- DC 9-36V, ACC

OUTPUT CURRENT

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

POWER CONSUMPTION

- Standby: ≈0W
- Maximum: 100W
- Maximum (with heater): 125W

LOW VOLTAGE PROTECTION

- User selectable and programmed at installation

HYBRID COMPONENT™ TECHNOLOGY

Modular design for on-site service, maintenance and upgrades in minutes

HOUSING/CASING

- Removable, shock-mounted
- Vandal-resistant locking hard drive
- Shock-resistant: MIL-STD-810F
- Aluminum
- 2 built-in fans for temperature regulation

OPTIONAL AI FEATURES

OPTIONAL COMPONENTS

VIRTUAL SYNCHRONIZED MAPPING™

GPS ANTENNA (ACTIVE OR PASSIVE)

CELLULAR MODEM (COMPATIBLE WITH SI6GM)

**Advanced Fast Idle
System (AFIS)**

INTERMOTIVE

**VEHICLE
CONTROLS**

An ISO 9001:2015 Registered Company

Advanced Fast Idle System (AFIS)

Automatic High Idle System

Overview

- Automatic or manual elevation of the vehicle's RPM up to three customizable speeds
- Setting the Park brake is not required, but is a configurable feature
- The system will automatically engage if the battery voltage drops below 12.5 volts (configurable)
- Simple plug and play connections to the OEM chassis

Features

- Dynamic Load Response (DLR) technology monitors engine RPM and maintains speed at all load conditions
- Includes on-board LED diagnostics
- CPU performs a self-diagnosis every time the vehicle is started
- The vehicle must be in Park for the system to engage
- High idle RPM levels are field programmable
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Proudly distributed by

LGS GROUP
AUTOMOTIVE TECHNOLOGIES

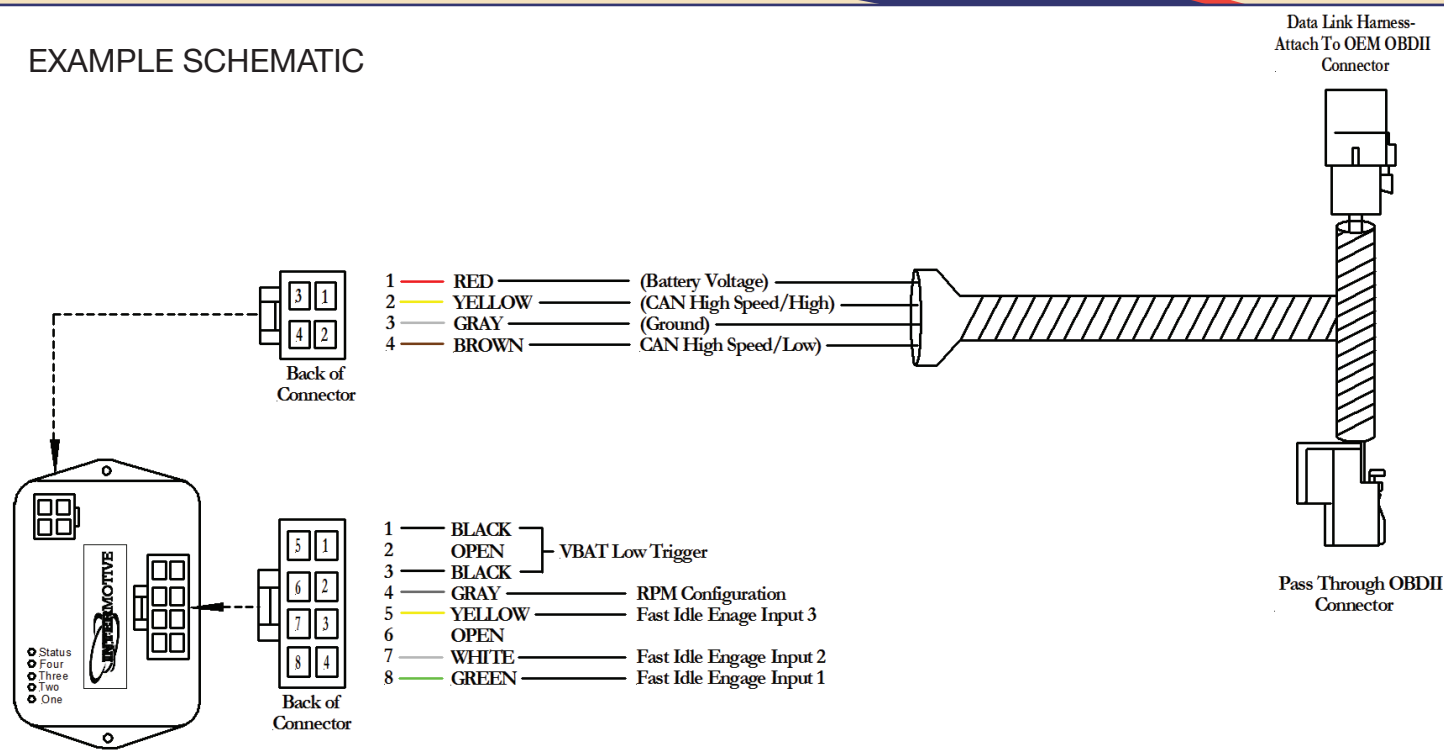
(775) 831-2002



Details

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

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Three
Current Draw	~ 60 mA
Quiescent Draw	~ 15 mA (sleep current)
CAN Speed	High speed
Temperature Range	-40°C to 80°C
Dimensions	3" L x 2" W x 1" H





TRANSIGN®

YOUR DESTINATION BEGINS HERE



The LED Destinator® Series - perfect for fleets of all types - is available in a variety of sizes and colors to fit your installation and display needs. These versatile and highly adaptive signs offer full integration into Destination, Route, and Next Stop announcement services, always keeping your customers pointed towards their next destination.



STANDARD FEATURES

- Destination Messages
- Next Stop Announcements
- Public Relations Messaging
- Scrolling/Flashing/Stacked Messages

SOFTWARE AND PROGRAMMING

Our signs and control modules are pre-programmed and include FREE software. Advanced controllers are available for J1708/J1587 system integration and Hands-Free operation, ensuring the safest and most reliable performance for any fleet.



AVAILABLE ADVANCED FEATURES INCLUDE:

- Automated GPS message progression
- Hands-Free operation for safety
- Voice Announcements
- J1708/J1587 integration compatible
- Automatic brightness control
- Basic programming software included (USB)
- Maintenance free- ZERO cost of ownership
- Many OCU options to suit your needs



BUY AMERICA - MADE IN U.S.A.

Using the highest quality parts, our LED Destinator® Signs are proudly made in Detroit, Michigan USA in full compliance with the Buy America Act.

LED DESTINATOR™ WARRANTY INFO

With a lifetime warranty that outlasts the lifetime of most vehicles (100,000 hours at full brightness), our signs will exceed your expectations in reliability and performance.



ABOUT TRANSIGN

Established in 1959, Transign is a leading provider of high-quality signage for the transit industry. We remain committed to providing world-class U.S. based customer service and technical support.

Transign®, 281 Collier Road, Auburn Hills, Michigan 48326
Toll Free: 855.535.7446 | Main: 248.623.6400 | Fax: 248.623.2930
www.transignllc.com

LED Destinator® Electronic Signs - Dimensions

Signs	Pixel Count H x W (pixels)	Display H x W (in)	Enclosure H x W x D (in)
LD16160	16 x 160	6 1/2 x 63 1/8	9 1/2 x 64 5/8 x 2 3/8
LD16128	16 x 128	6 1/2 x 50 1/2	9 1/2 x 52 x 2 3/8
LD16112	16 x 112	6 1/2 x 44 1/8	9 1/2 x 45 3/4 x 2 3/8
LD1696	16 x 96	6 1/2 x 37 7/8	9 1/2 x 39 3/8 x 2 3/8
LD1680	16 x 80	6 1/2 x 31 5/8	9 1/2 x 33 x 2 3/8
LD1632	16 x 32	6 1/2 x 12 3/4	9 1/2 x 14 x 2 3/8
LD12112	12 x 112	4 7/8 x 44 1/8	8 x 45 3/4 x 2 3/8
LD1280	12 x 80	4 7/8 x 31 5/8	8 x 33 1/8 x 2 3/8
LD1232	12 x 32	4 3/4 x 12 3/4	8 x 14 x 2 3/8
LD896	8 x 96	3 1/4 x 37 7/8	6 3/8 x 39 3/8 x 2 3/8
LD864	8 x 64	3 1/4 x 25 1/4	6 3/8 x 26 3/4 x 2 3/8

Be sure to check out our other great products!



Stop Request Signs

- Flush, ceiling or surface mount
- Any font/color combination
- Back-lit by efficient LED's



Interior Passenger Information Sign

- Easy to install
- ADA compliant
- LED's rated at 100K hours



Roller Curtain Signs

- High-res logos & graphics
- Perfect for large fleets
- Virtually maintenance free
- Reliable, efficient LED backlight
- Available in 12 and 24 VDC
- Up to 120 destinations



Run Number Box

- Metal or plastic frame
- Available in 2, 3, or 4 digits
- Easy to read 4" lettering
- Spring loaded return
- Reliable, efficient LED backlight
- Virtually maintenance free



LED Run Number Box

- Steel enclosure
- ADA compliant
- Reliable LED's
- Multiple colors
- Automatic brightness
- 12 and 24 VDC

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Violators will be prosecuted to the fullest extent of the law in accordance with
Penal Code Sections 171.7, 594, 640, 640.5 and 16590
Public Utilities Code Sections 99170
For more information, please visit
CTBus.com/CustomerConduct



Farebox
Mount



PA systems

One- and Two-Channel PA Amplifiers



Front View



Back View

- 8"L x 3.125"W x 1.75"H
- Two microphone inputs
- 50-watt power output
- XLR priority microphone input overrides Mini-Fit™ secondary microphone input
- Volume control and AUX audio input (one-channel)
- Separate internal/external volume control and AUX audio input with speaker selectability (two-channel)
- Approved OEM standard option equipment



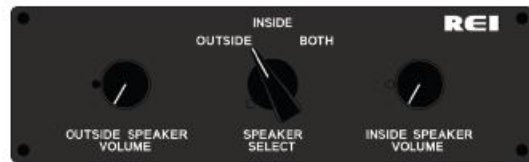
ECHO PAs

Voice-Record Dash Model

- 4.16"L x 8"W x 1.88"H panel
- 12/24 volt/50-watt power output
- Single microphone input with priority control (Mini-Fit™ connector)
- Internal microphone with AUX microphone input
- Internal and external speaker volume controls
- Approved OEM standard option
- *Microphone not included

Two-Channel Transit PA Amplifier

With Remote-Mount Volume Control Panel



- 8"L x 2.375"W
- Remote panel-mounted internal and external volume control



Front View



Back View

- 8"L x 3.125"W x 1.75"H
- Two microphone inputs
- AUX audio input



Panel-Mounted PA Amplifier

- 7"L x 2"H panel
- 12-volt/40-watt power output
- Single channel
- Two microphone inputs with priority control (Microphone not included)

Four-Channel Transit PA Amplifier



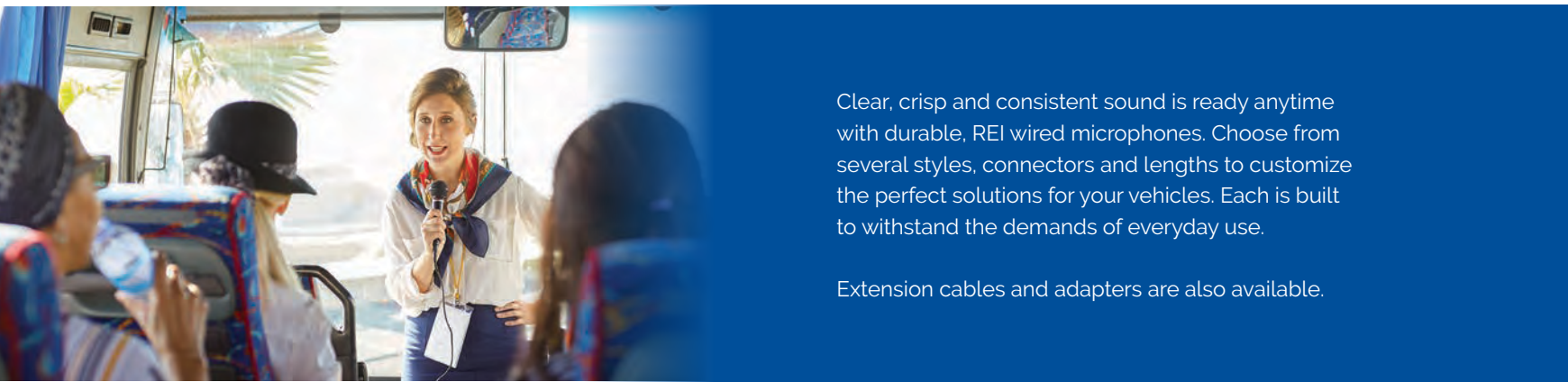
- 4"L x 2.05"W x 1.88"H
- Output cable to speakers
- 42 watts x 4
- Input cable from radio
- Easily integrates with OEM equipment
- Steel housing for easy installation
- Uses Dynamic Hand-Held Mic (#480343)



Panel-Mounted PA Systems

- 12-volt/25-watt power output
- Single channel
- Volume control
- Interior/exterior speaker selection (not included on 7"L x 2"H panel)

wired microphones



Clear, crisp and consistent sound is ready anytime with durable, REI wired microphones. Choose from several styles, connectors and lengths to customize the perfect solutions for your vehicles. Each is built to withstand the demands of everyday use.

Extension cables and adapters are also available.

dynamic microphones



Handheld Microphone



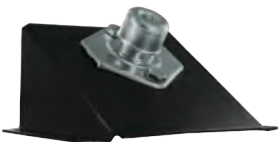
Entertainment-Style Microphone and Cable



Dynamic Headset Microphone (Hands-Free Use)



Belt-Clip Preamp (Hands-Free Use)



Plunger-Style Foot Switch In Metal Housing



carbon microphones

Handheld Microphone

gooseneck microphones

REI offers more than 30 different styles of gooseneck microphones. Call for details.



Slimline Mini Gooseneck Microphone



Vandal-Resistant Gooseneck Microphone



Gooseneck Microphone

wireless microphones

Features

Wireless Handheld Microphone

- Digital LCD display
- 100 selectable channels
- On/off switch
- Battery level indicator
- Easy infrared pairing
- Standby mode for faster response
- Up to eight hours of continuous use
- Rechargeable
- Requires two rechargeable AA batteries
- Frequency range: UHF 530-570 MHz

Charging Station

- 12/24 volt
- LED indication of charge status
- Universal station for handheld microphone and belt-pack transmitter
- Refresh cycle to ensure optimum charge



Wireless Mic & Charging Station

Receiver

- Full-status LCD display
- Dual band with 100 channels per band/200 total
- Radio signal and audio level indicators
- 12/24 volt
- Power on/off switch
- Automatic infrared pairing
- Frequency range: UHF 530-570 MHz



Receiver

Belt-Pack Transmitter

- Digital LCD display
- 100 selectable channels
- Three-pin mini XLR receptacle
- On/off switch
- Battery level indicator
- Easy infrared pairing
- Standby mode for faster response
- Up to eight hours of continuous use
- Rechargeable
- Requires two rechargeable AA batteries
- Frequency range: UHF 530-570 MHz



Belt-Pack Transmitter

Headset Microphone

- Lightweight: 1.1 oz.
- Frequency response: 100-10 kHz



Headset Mic

Lapel Microphone

- Unidirectional microphone with spring clip
- Four-foot cable with three-pin mini XLR connector



Lapel Mic

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330



Client Proposal

Prepared by:

Mark Prohaska

Office: 641-923-2855

Quote ID: End158Air

Date: 10/25/2022



Pritchard Commercial Sales | 1400 South 24th Street Suite B, Clear Lake, Iowa, 50428

Office: 641-923-2855



Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle

Code	Description
Base Vehicle	
E4F	Base Vehicle Price (E4F)
Packages	
782A	<p>Order Code 782A</p> <p><i>Includes:</i></p> <ul style="list-style-type: none">- Engine: 7.3L V8 Premium-Rated- Transmission: 6-Speed O/D w/Tow Haul- Includes auxiliary cooler.- 4.56 Axle Ratio- GVWR: 14,500 lb Payload Package- Tires: LT225/75R16E BSW A/S- Hankook DynaPro HT.- Wheels: 16" x 6" White Painted Steel- Radio: AM/FM Stereo w/Clock Display & 2 Speakers- Includes Bluetooth capability and USB input.- Auxiliary Fuel Port <p>Located on the fuel tank, offers entry point access to fuel tank for specialized gas powered equipment such as a power generator, powered wheelchair lift, etc.</p>
Powertrain	
99N	Engine: 7.3L V8 Premium-Rated
44P	Transmission: 6-Speed O/D w/Tow Haul
	<i>Includes auxiliary cooler.</i>
X83	4.56 Axle Ratio
20F	GVWR: 14,500 lb Payload Package
Wheels & Tires	
T68	Tires: LT225/75R16E BSW A/S
	<i>Hankook DynaPro HT.</i>
646	Wheels: 16" x 6" White Painted Steel
Seats & Seat Trim	
21T	Captain's Chair Driver Side Only
	<i>Includes:</i>
	<ul style="list-style-type: none">- Cloth Captain's Chairs- Passenger Side Air Bag Delete
M	Cloth Captain's Chairs

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle (cont'd)

Code	Description
Other Options	
L23	Raw Material Surcharge
PAINT	Monotone Paint Application
158WB	158" Wheelbase
153	License Plate Bracket
60X	Right Hand Door Delete <i>Deletes passenger side A-pillar grab handle, right hand seat belt system and hardware, passenger side air bag, under-seat stowage, passenger side sun visor, passenger side speaker and headliner.</i> <i>Includes:</i> <i>- Exterior Mirror Delete</i>
625	Day/Night Interior Rearview Mirror
525	Cruise Control
41H	Engine Block Heater <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i>
587	Radio: AM/FM Stereo w/Clock Display & 2 Speakers <i>Includes Bluetooth capability and USB input.</i>
559	Frame Pucks (Isolators) <i>Includes 12 body mounts.</i>
47Z	Ambulance Prep Package Not Required Required on orders not destined for ambulance use.
18A	High Series Exterior Upgrade Package <i>Includes:</i> <i>- Front Chrome Bumper</i> <i>- Chrome Grille</i>
47B	Shuttle Bus Prep Package <i>Includes:</i> <i>- High Series Exterior Upgrade Package</i> <i>- Front Chrome Bumper</i> <i>- Chrome Grille</i> <i>- Engine Block Heater</i> <i>Single element. Recommended when minimum temperature is 10 degrees fahrenheit or below.</i> <i>- Frame Pucks (Isolators)</i> <i>Includes 12 body mounts.</i> <i>- License Plate Bracket</i> <i>- Front Headliner Delete</i>

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

As Configured Vehicle (cont'd)

Code	Description
	- Front Dome Lamp Delete
54F	Exterior Mirror Delete
162	Vinyl Floor Covering

Fleet Options

57J	Auxiliary Heater Connection Package Requires valid FIN code. <i>Includes rear fan controls.</i>
942	Non-Configurable Daytime Running Lamps Requires valid FIN code.
672	Maximum Front GAWR: 5000 lbs. Requires valid FIN code.
FLADCR	Fleet Advertising Credit
WARANT	Fleet Customer Powertrain Limited Warranty Requires valid FIN code. <i>Ford is increasing the 5-year 60,000-mile limited powertrain warranty to 5-years, 100,000 miles. Only Fleet purchasers with a valid Fleet Identification Number (FIN code) will receive the extended warranty. When the sale is entered into the sales reporting system with a sales type fleet along with a valid FIN code, the warranty extension will automatically be added to the vehicle. The extension will stay with the vehicle even if it is subsequently sold to a non-fleet customer before the expiration. This extension applies to both gas and diesel powertrains. Dealers can check for the warranty extension on eligible fleet vehicles in OASIS. Please refer to the Warranty and Policy Manual section 3.13.00 Gas Engine Commercial Warranty. This change will also be reflected in the printed Warranty Guided distributed with the purchase of every new vehicle.</i>

Emissions

425	50 State Emission System
-----	--------------------------

Exterior Color

YZ_02	Oxford White
-------	--------------

Interior Color

ME_01	Medium Flint w/Cloth Captain's Chairs
-------	---------------------------------------

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs

Dimensions

- Conventional Capacity: 7,500 lbs.
- Vehicle body length: 261"
- Vehicle body height: 80"
- Front track: 69"
- Vehicle turning radius: 27'
- Axle to end of frame: 69"
- Frame yield strength (psi): 36000
- Front brake diameter: 13.6"
- Headroom first-row: 42.0"
- Shoulder room first-row: 68.1"
- GCWR: 22,000 lbs.
- Vehicle body width: 79"
- Wheelbase: 158"
- Rear track: 78"
- Cab to axle: 100"
- Frame section modulus: 6 cu.in.
- Front bumper to back of cab: 92"
- Rear brake diameter: 13.6"
- Leg room first-row: 42.1"
- Hip room first-row: 65.6"

Powertrain

- 7.3L V-8 variable valve control, engine with 325HP
- Injection Type: sequential MPI
- Horsepower: 325 HP@3750 RPM
- * **Engine block heater**
- TorqShift 6-speed automatic
- Recommended fuel: regular unleaded
- Engine cylinders: V-8
- Spark ignition system
- Torque: 450 lb.-ft.@3750 RPM
- Radiator
- Rear-wheel drive
- All-speed ABS and driveline traction control

Fuel Economy and Emissions

- Gasoline secondary fuel type
- Federal emissions

Suspension and Handling

- Standard ride suspension
- Heavy-duty rear shock absorbers
- Heavy-duty front shock absorbers

Driveability

- 4-wheel disc brakes
- 4-wheel antilock (ABS) brakes
- Hill start assist
- Front anti-roll bar
- Rigid axle rear suspension
- Rear anti-roll bar
- Re-circulating ball steering
- Front ventilated disc brakes
- Three channel ABS brakes
- Independent front suspension
- Front coil springs
- Leaf spring rear suspension
- Hydraulic power-assist steering system
- 2-wheel steering system

Body Exterior

- * **1 door**
- Monotone paint
- Black windshield trim
- Clearcoat paint
- Black side window trim
- Black door handles

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

- * **Chrome front bumper**
- * **Chrome grille**
- 16 x 6-inch front and dual rear painted steel wheels
- Black front bumper rub strip
- LT225/75RS16 AS BSW front and rear tires

Convenience

- Manual door locks
- * **Day/Night rearview mirror**
- Engine cover console
- Standard glove box
- Driver and passenger door bins
- * **Cruise control with steering wheel mounted controls**
- Manual first-row windows
- Additional console storage
- Front beverage holders
- PRND in IP

Comfort

- Manual climate control
- Front vinyl floor covering
- Manual tilting steering wheel
- Urethane steering wheel
- * **Auxiliary rear heater provision**
- Front floor coverage
- Manual telescopic steering wheel

Seats and Trim

- * **Seating capacity: 1**
- * **Captain front seats**
- Fixed front seat head restraints
- Manual reclining driver seat
- * **Cloth front seat upholstery**
- * **Driver bucket seat**
- Driver seat with 4-way directional controls
- Driver seat armrest
- Manual driver seat fore/aft control

Entertainment Features

- AM/FM stereo radio
- External memory control
- Standard grade speakers
- Fixed audio antenna
- Seek scan
- * **Speakers number: 1**
- Bluetooth wireless audio streaming

Lighting, Visibility and Instrumentation

- Analog instrumentation display
- In-radio display clock
- Oil pressure gauge
- Voltmeter
- Aero-composite headlights
- Auto on/off headlight control
- Variable intermittent front windshield wipers
- Variable instrument panel light
- Trip odometer
- Tachometer
- Engine/electric motor temperature gauge
- Light tinted windows
- Halogen headlights
- Multiple enclosed headlights
- Sun visor strip
- Daytime running lights

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Technology and Telematics

- Bluetooth handsfree wireless device connectivity
- 2 USB ports
- FordPass Connect 4G mobile hotspot internet access

Safety and Security

- Driver front impact airbag
- Front height adjustable seatbelts
- * **1 seatbelt pre-tensioner**
- Electronic stability control system
- * **1 airbag**
- Front seatbelt pretensioners
- Fleet Telematics Modem vehicle tracker

Dimensions

General Weights

* Curb weight	5,446 lbs.	* Rear curb weight	2,419 lbs.
GVWR	14,500 lbs.	Payload	8,980 lbs.

Trailing Weights

Conventional capacity	7,500 lbs.	GCWR	22,000 lbs.
-----------------------	------------	------	-------------

Front Weights

* Front curb weight	3,027 lbs.	GAWR front	5,000 lbs.
Axle capacity front	5,000 lbs.	Spring rating front	5,000 lbs.
Tire/wheel capacity front	5,000 lbs.		

Rear Weights

GAWR rear	9,600 lbs.	Axle capacity rear	9,600 lbs.
Spring rating rear	9,600 lbs.	Tire/wheel capacity rear	9,880 lbs.

Off Road

Loading floor height	26.0 "
----------------------	--------

Exterior Measurements

Vehicle body length	261"	Vehicle body width	79"
Vehicle body height	80"	Wheelbase	158"
Front brake diameter	13.6"	Rear brake diameter	13.6"
Rear frame height loaded	26"	Front track	69"
Rear track	78"	Vehicle turning radius	27'
Cab to axle	100"	Axle to end of frame	69"
Frame section modulus	6 cu.in.	Frame yield strength (psi)	36000
Front bumper to back of cab	92"		

Headroom

Headroom first-row	42.0"
--------------------	-------

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Legroom

Leg room first-row 42.1"

Shoulder Room

Shoulder room first-row 68.1"

Hip Room

Hip room first-row 65.6"

Powertrain

Engine

Engine 7.3L V-8 variable valve control, engine with 325HP

Engine cylinders V-8

Engine location Front mounted engine

Engine mounting direction Longitudinal mounted engine

Cylinder head material Aluminum cylinder head

Valves per cylinder 2

Injection type sequential MPI

Ignition Spark ignition system

Engine block material Iron engine block

Engine Specs

Displacement 7.3L

Bore 4.21"

Compression ratio 10.5

cc 445 cu.in.

Stroke 3.98"

SAEJ1349 AUG2004 compliant

Engine Power

Horsepower 325 HP@3750 RPM

Torque 450 lb.-ft. @3750 RPM

Alternator

Alternator amps 210A

Alternator type Heavy-duty alternator

Battery

Battery amps 78Ah

Battery rating 750CCA

Battery type HD lead acid battery

Engine Extras

* **Block heater** **Engine block heater**

Radiator Radiator

Transmission

Transmission TorqShift 6-speed automatic

Transmission electronic control Transmission electronic control

Overdrive transmission Overdrive transmission

Lock-up transmission Lock-up transmission

First gear ratio 3.974

Second gear ratio 2.318

Third gear ratio 1.516

Fourth gear ratio 1.149

Fifth gear ratio 0.858

Sixth gear ratio 0.674

Reverse gear ratio 3.128

Stall ratio 1.9

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Selectable mode transmission... Selectable mode transmission

Transmission oil cooler... Transmission oil cooler

Drive Type

Drive type... Rear-wheel drive

Drivetrain

Axle ratio... 4.56

Exhaust

Tailpipe... Stainless steel single exhaust

Fuel

Fuel type... regular unleaded

Fuel Tank

Fuel tank capacity... 55.00 gal.

Drive Feature

Traction control... All-speed ABS and driveline traction control

Provisions

* Provisions... Shuttle bus provisions

Fuel Economy and Emissions

Fuel Economy

Secondary fuel type... Gasoline secondary fuel type

Emissions

Emissions... Federal emissions

Emissions tiers... Tier 2 Bin 8 emissions

Suspension and Handling

Suspension

Suspension... Standard ride suspension

Front shock absorbers... Heavy-duty front shock absorbers

Rear shock absorbers... Heavy-duty rear shock absorbers

Driveability

Brakes

Brake type... 4-wheel disc brakes

ABS brakes... Three channel ABS brakes

Ventilated brakes... Front ventilated disc brakes

ABS brakes... 4-wheel antilock (ABS) brakes

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Brake Assistance

Hill start assist Hill start assist

Front Suspension

Anti-roll bar front Front anti-roll bar
Suspension ride type front Independent front suspension

Front Spring

Regular front springs Regular front springs
Springs front Front coil springs

Rear Spring

Springs rear Rear leaf springs
Rear springs Regular grade rear springs

Rear Suspension

Anti-roll bar rear Rear anti-roll bar
Suspension type rear Leaf spring rear suspension

Suspension ride type rear Rigid axle rear suspension

Steering

Steering Hydraulic power-assist steering system
Steering type Re-circulating ball steering
Steering type number of wheels 2-wheel steering system

Exterior

Front Wheels

Front wheels diameter 16"
Front wheels width 6"

Rear Wheels

Rear wheels diameter 16"
Rear wheels width 6"

Front And Rear Wheels

Appearance painted
Material steel

Front Tires

Aspect 75
Sidewalls BSW
Tread AS
Width 225mm
Diameter 16"
Speed S
Type LT
Front wheel - RPM 709

Rear Tires

Aspect 75
Sidewalls BSW
Tread AS
Width 225mm
Diameter 16"
Speed S
Type LT
Rear wheel - RPM 709

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



Prepared by: Mark Prohaska

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Body Exterior

Exterior Features

* **Number of doors** **1 door**

* **License plate front bracket** **Front license plate bracket**

Body

Body panels Fully galvanized steel body panels with side impact beams

Tires

Front tires LT load rating E

Rear tires LT load rating E

Wheels

Dual rear wheels Dual rear wheels

Convenience

Door Locks

Door locks Manual door locks

Cruise Control

* **Cruise control** **Cruise control with steering wheel mounted controls**

Rear View Mirror

* **Day/Night rearview mirror** **Day/Night rearview mirror**

Front Side Windows

First-row windows Manual first-row windows

Consoles

Console Engine cover console

Power Outlets

12V power outlets 2 12V power outlets

Storage

Door bins front **Driver and passenger door bins**
Glove box Standard glove box

Beverage holders **Front beverage holders**
Console storage **Additional console storage**

Miscellaneous

PRND in IP PRND in IP

Comfort

Climate Control

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Climate control Manual climate control

* **Auxiliary rear heater** **Auxiliary rear heater provision**

Floor Trim

Floor covering Front vinyl floor covering

Floor coverage Front floor coverage

Steering Wheel

Steering wheel telescopic Manual telescopic steering wheel

Steering wheel material Urethane steering wheel

Steering wheel tilt Manual tilting steering wheel

Seats and Trim

Seat Capacity

* **Seating capacity** **1**

Front Seats

* **Front seat type** **Captain front seats**

Driver seat direction Driver seat with 4-way directional controls

* **Split front seats** **Driver bucket seat**

Driver seat fore/aft control Manual driver seat fore/aft control

Front head restraints Fixed front seat head restraints

Armrests front driver Driver seat armrest

Reclining driver seat Manual reclining driver seat

Front Seat Trim

* **Front seat upholstery** **Cloth front seat upholstery**

* **Front seatback upholstery** **Cloth front seatback upholstery**

Gearshifter Material

Gearshifter material Urethane gear shifter material

Entertainment Features

Radio Features

External memory External memory control

Seek scan Seek scan

Speakers

Speakers Standard grade speakers

* **Speakers number** **1**

Audio Features

Wireless streaming Bluetooth wireless audio streaming

Lighting, Visibility and Instrumentation

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



Prepared by: Mark Prohaska

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

Instrumentation

Trip odometer	Trip odometer	Instrumentation display	Analog instrumentation display
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Instrumentation Displays

Clock	In-radio display clock
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Instrumentation Gauges

Tachometer	Tachometer	Oil pressure gauge	Oil pressure gauge
Voltmeter	Voltmeter	Engine/electric motor temperature gauge	Engine/electric motor temperature gauge

Instrumentation Warnings

Engine temperature warning	Engine temperature warning	Oil pressure warning	Oil pressure warning
Low fuel warning	Low fuel warning	Battery charge warning	Battery charge warning
Headlights on reminder	Headlights on reminder	Key in vehicle warning	Key in vehicle warning
Service interval warning	Service interval indicator		

Glass

Tinted windows	Light tinted windows
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Headlights

Headlights	Halogen headlights	Headlight type	Aero-composite headlights
Auto headlights	Auto on/off headlight control	Multiple headlights	Multiple enclosed headlights

Front Windshield

Wipers	Variable intermittent front windshield wipers	Sun visor strip	Sun visor strip
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Interior Lighting

Variable panel light	Variable instrument panel light
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Lights

Running lights	Daytime running lights
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Technology and Telematics

Connectivity

Handsfree	Bluetooth handsfree wireless device connectivity
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Internet Access

Internet access	FordPass Connect 4G mobile hotspot internet access
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Prepared by: Mark Prohaska

Pritchard Commercial Sales | 1400 South 24th Street Suite B Clear Lake Iowa | 50428

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Selected Equip & Specs (cont'd)

USB Ports

USB ports 2 USB ports

Safety and Security

Airbags

Front impact airbag driver Driver front impact airbag * Number of airbags 1 airbag

Seatbelts

Height adjustable seatbelts Front height adjustable seatbelts Seatbelt pretensioners Front seatbelt pretensioners

* Seatbelt pretensioners number .. 1 seatbelt pretensioner

Security System

Vehicle tracker Fleet Telematics Modem vehicle tracker

Traction Control

Electronic stability control Electronic stability control system

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



Prepared by: Mark Prohaska

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2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 330 | Quote ID: End158Air

Warranty

Standard Warranty

Basic Warranty

Basic warranty 36 months/36,000 miles

Powertrain Warranty

Powertrain warranty 60 months/60,000 miles

Corrosion Perforation





Corrosion perforation warranty 60 months/unlimited







Roadside Assistance Warranty

Roadside warranty 60 months/60,000 miles

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



MODEL & DESCRIPTION	QTY
 V8X3 Vulcan Series 8 Channel HD/IP Mobile Digital Video Recorder • 8 Channels with 4 Channels D1, WD1, 720P, or up to 1080P + 4 Channels P up to 1080P • 1TB Platter Hard Drive • Built-in Wi-Fi Module • Built-in G-Force Sensor • Vandal-Resistant Locking Front Cover • Panic Button • H.264/H.265 Compression	1
 SD64GB 64GB SD Solid-State Memory Card We recommend the use of storage media provided only by AngelTrax for our recording devices. AngelTrax hard drives and SD cards are optimized for around-the-clock video surveillance and are designed to withstand extreme temperatures. Standard hard drives and SD cards purchased through consumer resellers are not made for surveillance devices and have been known to stop functioning at any time without warning, causing a loss of video.	1
 VULPBH Vulcan Series Panic Button Housing PC color	
 HD2100V Vulcan Series Anvil 2100 HD Low Profile Camera - at entry, at lift • 2.1mm Lens with Fully Articulating Lens Casing, Adjustable Vertically and Horizontally at Installation • IP68 Rated Waterproof Interior/Exterior Camera • 1080P HD • 3 Megapixels • Noise-Gated Microphone • Vandal-Resistant Casing • Scratch-Resistant, Anti-Glare Glass Lens Cover • Infrared	6

MODEL & DESCRIPTION		QTY	
	HD2500V Vulcan Series Arvil 2500 HD Low Profile Camera - out windshield, back up • 2.5mm Lens with Fully Articulating Lens Casing, Adjustable Vertically and Horizontally at Installation • IP68 Rated Waterproof Interior/Exterior Camera • 1080P HD • 3 Megapixels • Noise-Gated Microphone • Vandal-Resistant Casing • Scratch-Resistant, Anti-Glare Glass Lens Cover • Infrared	2	
	HD4CBL 13.12 ft. HD Camera Cable	2	
	HD9CBL 29.53 ft. HD Camera Cable	6	
	VULBR100 Windshield Mounting Bracket for Vulcan Series HD-V Cameras	1	
	GPSZ1 Vulcan Series Dead Reckoning Passive GPS Antenna with Flash Memory • Compatible with Vulcan Series VX7AI and V8X3 MDVRs	1	
	VULSECKEY Security Key USB 3.0 for Vulcan Series VS, V5X3, V6X3 and V8X3 MDVRs	1	
		1	



Endera Commercial Bus Limited Warranty

This limited product warranty for Endera commercial buses (hereinafter referred to as “**Limited Warranty**”) is issued by Endera Automotive, LCC, which is headquartered at 804 N. Pratt St, Ottawa, OH 45875, or its legal successors or assigns (hereinafter collectively referred to as “**Endera**”), and applies exclusively to Endera commercial buses (as defined in Section 1 hereof) sold and used in the United States.

1. Definition of Endera Commercial Buses and Components

Endera commercial buses (“**Vehicles**”) are defined in this Limited Warranty as the following product types:

ENDERA 23’, 24’ 25’ 26’ and 28’ bodies built on Ford E-series cutaway chassis and Chevrolet cutaway chassis.

“**Vehicle Components**” are defined in this Limited Warranty as the products, parts and components that are manufactured by Endera and that are incorporated into a Vehicle.

“**Third-party Components**” are defined in this Limited Warranty as any product, part, or component, including but not limited to the chassis and air conditioning system, that are part of the Vehicle and manufactured or supplied by a party other than Endera.

2. Limited Warranty Period and Beneficiary

2.1 Limited Warranty Period

The terms of this Limited Warranty take effect on the date that the Customer, as defined herein below, takes delivery of the Vehicle (hereinafter referred to as the “**Warranty Start Date**”) and shall remain in effect for the duration of the following periods, as applicable (each such period, a “**Limited Warranty Period**”).

1. For the earlier of five (5) years from the Warranty Start Date and 100,000 miles, Endera warrants that the body shell of the Vehicle (including structural metal components welded or riveted together forming the floor, side walls, roof, front or end caps) will be free from defects in structural integrity (“**Main Body Structure Warranty Period**”).

2. For the earlier of five (5) years from the Warranty Start Date and 100,000 miles, Endera warrants that the body shell will be free of rust-through resulting from corrosion (“**Corrosion Warranty Period**”). The Corrosion Warranty Period excludes surface rust or oxidization or natural occurring patina, corrosion due to using harsh chemical washes or degreasers or chemicals, hard road salts or calcium chloride, damage or corrosion caused by environmental causes such as flooding, airborne fallout, acts of nature or other atmospheric conditions.

3. For the earlier of two (2) years from the Warranty Start Date and 75,000 miles, Endera warrants that all Vehicle Components will be free from defects (“**Endera Components Warranty Period**”).



4. For all Third Party Components, the original manufacturer's warranty and warranty process applies.

2.2 Beneficiary

The sole and exclusive beneficiary of this Limited Warranty is the initial end customer who purchases the Vehicle directly or indirectly from Endera or from any one of its authorized manufacturers, dealers or distributors or from any other legitimate source, and is the initial owner of such Vehicle, and any of such Customer's permitted successors or assigns under Section 7 (hereinafter referred to as "**Customer**"). Upon Endera's written request, Customer shall confirm ownership of the Vehicle.

3. Exclusions

This Limited Warranty shall not apply to the following:

1. The Vehicle or Vehicle Components have been subject to misuse (such as driving over curbs, overloading, racing or using the Vehicle or Vehicle Component as a permanent stationary power source, or driving through water deep enough to cause water to enter the cabin), abuse, neglect, accidents, collisions or objects striking the Vehicle or Vehicle Components;
2. Damage to body structure, components, or finish, including paint, caused by chemicals, corrosive environments, or abrasion;
3. Damage caused by force majeure such as natural disasters, including but not limited to lightning, hail, frost, snow, storms, tidal waves, floods, fire or explosion, extreme temperatures, earthquakes, typhoons, tornadoes, volcanic eruptions, meteorites, ground motions, earth fissures, landslides, animal damage, hurricanes, or other unusually severe weather events;
4. Damage caused by installation of additional or replacement products, parts, components or attachments, or repairs, modifications or alterations;
5. Damage caused by surface rust, deterioration and damage of paint, trim, upholstery, and other appearance items that result from use and/or exposure to the elements, such as dents and scratches;
6. Parts and labor needed to maintain the Vehicle or Vehicle Components and the replacement of parts due to normal wear and tear, such as filters, belts, tires, brakes or other parts which are part of normal maintenance replacement; and normal maintenance of such parts, such as wiper blades, brake pads/liners, wheel alignment, filters and fluids;
7. Direct or indirect damage caused by theft, vandalism or acts beyond the control of Endera, including but not limited to accidents, riots, war, insurrection and civil disturbance;
8. Damage caused by the accident or negligence of Customer or any person other than Endera;
9. Damage caused by Customer's failure to provide normal preventative maintenance as customarily accepted in the industry, or damage caused by the Customer's failure to service the Vehicle or otherwise maintain and operate the Vehicle in accordance with the Endera product technical specifications or operating and maintenance manual;
10. Damage during shipment after delivery to Customer;



11. Vehicles that have had the odometer disconnected, altered, or inoperative with the result that actual mileage cannot be determined, vehicles that have ever been labeled or branded as dismantled, fire, flood, junk, rebuilt, reconstructed, or salvaged, or vehicles that have been determined to be a total loss by an insurance company;
12. Any aftermarket products, parts or components installed after delivery to Customer, or any damage caused due to the failure of such products, parts or components; or
13. Any other abuse or misuse by Customer.

4. Warranty Claims

4.1 Time Limit for Warranty Claims

All claims under the Limited Warranty must be submitted in writing to Endera within the earlier of (i) one hundred and eighty (180) calendar days after it became aware of non-conformity with the Limited Warranty, and (ii) the respective expiry date of the Limited Warranty Period. Endera shall have the right to reject any and all warranty claims submitted outside of such period. Endera will provide the Customer with instructions on how to proceed with the warranty claim.

4.2 Burden of Proof for Warranty Claims

A warranty claim will only be accepted if Customer provides reasonably sufficient documentary evidence to demonstrate that the root cause of the fault or non-conformity in the Vehicle or Vehicle Component is a breach of the Limited Warranty.

4.3 Warranty Claim Procedures

Customer shall, as soon as it becomes aware of an instance of non-conformity with the Limited Warranty, immediately (but in any event no later than the earlier of (i) one hundred and eighty (180) calendar days after it became aware of non-conformity with the Limited Warranty, and (ii) the respective expiry date of the Limited Warranty for the Vehicle or Vehicle Component) notify Endera's Customer Service department by giving it written notice sent to: Endera Corporation, Attn: Warranty Claim, 804 N. Pratt Street, Ottawa, OH 45875 or via email to warranty@enderacorp.com. Endera may designate a new or additional address by providing notice to Customer.

Customer shall provide the following information along with the notice: a) cause of the claim and related supporting documents; b) proof of purchase of the Vehicle or Vehicle Component (including but not limited to the sale contract, commercial invoice, delivery and acceptance certificate, payment voucher, etc.). If Customer did not purchase the Vehicle or Vehicle Component directly from Endera or one of its affiliates, it shall provide proof of purchase that can be traced back to a) the initial sale contract (commercial invoice, etc.); and b) the initial delivery date of the Vehicle or Vehicle Components.

5. Remedy for Warranty Claim

5.1 Remedy under the Limited Warranty

Should Endera confirm that the Vehicle or Vehicle Component is not in conformity with the Limited Warranty, it shall, at its sole discretion, within a reasonable time period, notify the Customer that Endera will either: a) repair the Vehicle or Vehicle Component at no charge; b) reimburse Customer the reasonably



and properly incurred costs of having a third party conduct the repairs, or c) in the case of Vehicle Component, replace the Vehicle Component at no charge. Endera may take possession of the Vehicle or Vehicle Component, conduct such repair at the location where it is held by Customer or request Customer to deliver the Vehicle or Vehicle Component to Endera or to a third party workshop approved by Endera. If Customer delivers the Vehicle or Vehicle Component to Endera or a workshop approved by Endera, the cost of such delivery and return delivery shall be at Customer's expense. All warranty work performed by a third party is subject to Endera's prior approval, and examination upon completion.

5.2 Exclusive Remedy

The remedy under the Limited Warranty as set forth above is the sole and exclusive responsibility and obligation of Endera to Customer under this Limited Warranty, and is also the sole and exclusive remedy of Customer for the Vehicle or Vehicle Component under this Limited Warranty.

Performance of Endera's warranty obligation under this Limited Warranty shall not extend the Limited Warranty Period. The original warranty periods shall still apply to the repaired Vehicle or repaired or replaced Vehicle Component. If the production of a Vehicle Component has been discontinued, withdrawn from the market, or is otherwise unavailable, Endera shall have the right to replace the Vehicle Component with a similar or superior type, the performance of which should not be lower than the original type.

6. Limitation of Liability

6.1 Notwithstanding anything to the contrary herein, the warranties set forth in this Limited Warranty are in lieu of all other warranties, whether express, implied, or statutory, including but not limited to any implied warranties of merchantability, fitness for a particular purpose or non-infringement. However, if Customer is identified as a "consumer" and the Vehicle or Vehicle Component as a "consumer product" in accordance with the laws governing the protection of consumer rights in the country where the vehicle was originally delivered by Endera to the original Customer, to the extent required by applicable law, any implied warranties of merchantability, fitness for a particular purpose or non-infringement are limited to the Limited Warranty Period set forth above, or such shorter period set forth in applicable law. This Limited Warranty gives Customer specific legal rights, and Customer may also have other rights that vary by state, province or jurisdiction, and such other rights shall remain unaffected.

6.2 Unless otherwise provided by applicable mandatory law, Endera shall not be liable for any of the following losses: a) personal injury or property damage; b) any other loss or injury whatsoever arising out of or in connection with the Vehicle or Vehicle Components (including but not limited to any defects in the Vehicle or Vehicle Components or arising from the use or installation thereof); and c) any incidental, consequential or special damages resulting from any cause. Endera's liability for fraudulent or willful intent, gross negligence or personal injury, in each case, under applicable mandatory liability law shall remain unaffected. Notwithstanding any other provision of this Limited Warranty and including if Endera is liable to compensate Customer hereunder, the total compensation paid or payable by Endera, and the total liability of Endera hereunder, shall not exceed the amount actually received by Endera as indicated in the original sales agreement for the Claim Vehicle or Vehicle Component. The limitations of liability under this Limited Warranty will



not apply to the extent restricted or prohibited by applicable mandatory law.

6.3 Customer acknowledges that the foregoing limitations on liability are an essential element of the relevant sale contract between the parties and that in the absence of such limitations the purchase price of the relevant Vehicle or Vehicle Component would be substantially higher.

6.4 Endera has adopted reasonable methods such as bolding, blackening and highlighting to draw the Customer's attention to clauses which exclude or limit its liability under this Limited Warranty, and have fully explained the relevant clauses as required by Customer. There is no disagreement between the parties over the understanding of any clause of this Limited Warranty.

7. Assignment of Warranty

Upon written notice to Endera, Customer may assign this Limited Warranty to an affiliate of Customer or a new owner of the Vehicle, provided that: (i) there is no outstanding payment due under the sale contract and (ii) the assignee agrees to be bound by these Limited Warranty terms. If requested by Endera, Customer shall provide reasonable evidence of such succession or transfer of ownership. This Limited Warranty may not otherwise be assigned or transferred, and any attempt to assign or transfer in violation of this Section 7 shall be null and void.

8. Miscellaneous

8.1 Severability

If any portion or provision of this Limited Warranty is held to be invalid, illegal or unenforceable under applicable law, or the application of such portion or provision to certain persons or in certain circumstances is held to be invalid, illegal or unenforceable, then the portion or provision shall be deemed to be changed and interpreted to accomplish the objectives of such portion or provision to the greatest extent possible under applicable law and the remaining portions or provisions of this Limited Warranty or the applicability of this Limited Warranty will remain unaffected, independent and valid.

8.2 Force Majeure

Endera shall not be responsible or liable in any way to Customer for any non-performance or delay in Endera's performance of its obligations under this Limited Warranty due to occurrences of any force majeure event, which is an event or circumstance that is not reasonably foreseeable, is beyond the reasonable control of and is not caused by the negligence or lack of due diligence of Endera. Such events or circumstances may include, but are not limited to: actions or inactions of any governmental authority or any civil, tribal, or military authority, acts of God, war, riot or insurrection, terrorism, blockades, embargoes, sabotage (including arson and vandalism), epidemics, pandemics, natural disasters, including but not limited to lightning, hail, frost, snow, storms, tidal waves, floods, fire or explosion, extreme temperatures, earthquakes, typhoons, tornadoes, volcanic eruptions, meteorites, ground motions, earth fissures, landslides, animal damage, hurricanes, or other unusually severe weather events, strikes, lockouts or other labor disputes, unavailability of suitable or sufficient labor, material, or capacity or technical or yield failures and any other unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood by Endera at the time of the sale of the Vehicle or Vehicle Components or the notification by Customer of the relevant warranty claim. Notwithstanding that the COVID-19 pandemic initiated prior to delivery of the Vehicle,



its effect on global supply chains, manufacturing and the economy are ongoing. In light of this, the COVID-19 pandemic and its effects may cause delays and constitute a force majeure event.

8.3 Governing Law and Dispute Resolution

Any dispute related to or arising out of this Limited Warranty, including without limitation any question regarding its existence, validity, breach, or termination, shall be referred to and finally resolved pursuant to the governing law clauses and dispute resolution procedures under the terms of sale between the original purchaser and Endera.



Endera Commercial Bus Limited Warranty

This limited product warranty for Endera commercial buses (hereinafter referred to as “**Limited Warranty**”) is issued by Endera Automotive, LCC, which is headquartered at 804 N. Pratt St, Ottawa, OH 45875, or its legal successors or assigns (hereinafter collectively referred to as “**Endera**”), and applies exclusively to Endera commercial buses (as defined in Section 1 hereof) sold and used in the United States.

1. Definition of Endera Commercial Buses and Components

Endera commercial buses (“**Vehicles**”) are defined in this Limited Warranty as the following product types:

ENDERA 23’, 24’ 25’ 26’ and 28’ bodies built on Ford E-series cutaway chassis and Chevrolet cutaway chassis.

“**Vehicle Components**” are defined in this Limited Warranty as the products, parts and components that are manufactured by Endera and that are incorporated into a Vehicle.

“**Third-party Components**” are defined in this Limited Warranty as any product, part, or component, including but not limited to the chassis and air conditioning system, that are part of the Vehicle and manufactured or supplied by a party other than Endera.

2. Limited Warranty Period and Beneficiary

2.1 Limited Warranty Period

The terms of this Limited Warranty take effect on the date that the Customer, as defined herein below, takes delivery of the Vehicle (hereinafter referred to as the “**Warranty Start Date**”) and shall remain in effect for the duration of the following periods, as applicable (each such period, a “**Limited Warranty Period**”).

1. For the earlier of five (5) years from the Warranty Start Date and 100,000 miles, Endera warrants that the body shell of the Vehicle (including structural metal components welded or riveted together forming the floor, side walls, roof, front or end caps) will be free from defects in structural integrity (“**Main Body Structure Warranty Period**”).

2. For the earlier of five (5) years from the Warranty Start Date and 100,000 miles, Endera warrants that the body shell will be free of rust-through resulting from corrosion (“**Corrosion Warranty Period**”). The Corrosion Warranty Period excludes surface rust or oxidization or natural occurring patina, corrosion due to using harsh chemical washes or degreasers or chemicals, hard road salts or calcium chloride, damage or corrosion caused by environmental causes such as flooding, airborne fallout, acts of nature or other atmospheric conditions.

3. For the earlier of two (2) years from the Warranty Start Date and 75,000 miles, Endera warrants that all Vehicle Components will be free from defects (“**Endera Components Warranty Period**”).



4. For all Third Party Components, the original manufacturer's warranty and warranty process applies.

2.2 Beneficiary

The sole and exclusive beneficiary of this Limited Warranty is the initial end customer who purchases the Vehicle directly or indirectly from Endera or from any one of its authorized manufacturers, dealers or distributors or from any other legitimate source, and is the initial owner of such Vehicle, and any of such Customer's permitted successors or assigns under Section 7 (hereinafter referred to as "**Customer**"). Upon Endera's written request, Customer shall confirm ownership of the Vehicle.

3. Exclusions

This Limited Warranty shall not apply to the following:

1. The Vehicle or Vehicle Components have been subject to misuse (such as driving over curbs, overloading, racing or using the Vehicle or Vehicle Component as a permanent stationary power source, or driving through water deep enough to cause water to enter the cabin), abuse, neglect, accidents, collisions or objects striking the Vehicle or Vehicle Components;
2. Damage to body structure, components, or finish, including paint, caused by chemicals, corrosive environments, or abrasion;
3. Damage caused by force majeure such as natural disasters, including but not limited to lightning, hail, frost, snow, storms, tidal waves, floods, fire or explosion, extreme temperatures, earthquakes, typhoons, tornadoes, volcanic eruptions, meteorites, ground motions, earth fissures, landslides, animal damage, hurricanes, or other unusually severe weather events;
4. Damage caused by installation of additional or replacement products, parts, components or attachments, or repairs, modifications or alterations;
5. Damage caused by surface rust, deterioration and damage of paint, trim, upholstery, and other appearance items that result from use and/or exposure to the elements, such as dents and scratches;
6. Parts and labor needed to maintain the Vehicle or Vehicle Components and the replacement of parts due to normal wear and tear, such as filters, belts, tires, brakes or other parts which are part of normal maintenance replacement; and normal maintenance of such parts, such as wiper blades, brake pads/liners, wheel alignment, filters and fluids;
7. Direct or indirect damage caused by theft, vandalism or acts beyond the control of Endera, including but not limited to accidents, riots, war, insurrection and civil disturbance;
8. Damage caused by the accident or negligence of Customer or any person other than Endera;
9. Damage caused by Customer's failure to provide normal preventative maintenance as customarily accepted in the industry, or damage caused by the Customer's failure to service the Vehicle or otherwise maintain and operate the Vehicle in accordance with the Endera product technical specifications or operating and maintenance manual;
10. Damage during shipment after delivery to Customer;



11. Vehicles that have had the odometer disconnected, altered, or inoperative with the result that actual mileage cannot be determined, vehicles that have ever been labeled or branded as dismantled, fire, flood, junk, rebuilt, reconstructed, or salvaged, or vehicles that have been determined to be a total loss by an insurance company;
12. Any aftermarket products, parts or components installed after delivery to Customer, or any damage caused due to the failure of such products, parts or components; or
13. Any other abuse or misuse by Customer.

4. Warranty Claims

4.1 Time Limit for Warranty Claims

All claims under the Limited Warranty must be submitted in writing to Endera within the earlier of (i) one hundred and eighty (180) calendar days after it became aware of non-conformity with the Limited Warranty, and (ii) the respective expiry date of the Limited Warranty Period. Endera shall have the right to reject any and all warranty claims submitted outside of such period. Endera will provide the Customer with instructions on how to proceed with the warranty claim.

4.2 Burden of Proof for Warranty Claims

A warranty claim will only be accepted if Customer provides reasonably sufficient documentary evidence to demonstrate that the root cause of the fault or non-conformity in the Vehicle or Vehicle Component is a breach of the Limited Warranty.

4.3 Warranty Claim Procedures

Customer shall, as soon as it becomes aware of an instance of non-conformity with the Limited Warranty, immediately (but in any event no later than the earlier of (i) one hundred and eighty (180) calendar days after it became aware of non-conformity with the Limited Warranty, and (ii) the respective expiry date of the Limited Warranty for the Vehicle or Vehicle Component) notify Endera's Customer Service department by giving it written notice sent to: Endera Corporation, Attn: Warranty Claim, 804 N. Pratt Street, Ottawa, OH 45875 or via email to warranty@enderacorp.com. Endera may designate a new or additional address by providing notice to Customer.

Customer shall provide the following information along with the notice: a) cause of the claim and related supporting documents; b) proof of purchase of the Vehicle or Vehicle Component (including but not limited to the sale contract, commercial invoice, delivery and acceptance certificate, payment voucher, etc.). If Customer did not purchase the Vehicle or Vehicle Component directly from Endera or one of its affiliates, it shall provide proof of purchase that can be traced back to a) the initial sale contract (commercial invoice, etc.); and b) the initial delivery date of the Vehicle or Vehicle Components.

5. Remedy for Warranty Claim

5.1 Remedy under the Limited Warranty

Should Endera confirm that the Vehicle or Vehicle Component is not in conformity with the Limited Warranty, it shall, at its sole discretion, within a reasonable time period, notify the Customer that Endera will either: a) repair the Vehicle or Vehicle Component at no charge; b) reimburse Customer the reasonably



and properly incurred costs of having a third party conduct the repairs, or c) in the case of Vehicle Component, replace the Vehicle Component at no charge. Endera may take possession of the Vehicle or Vehicle Component, conduct such repair at the location where it is held by Customer or request Customer to deliver the Vehicle or Vehicle Component to Endera or to a third party workshop approved by Endera. If Customer delivers the Vehicle or Vehicle Component to Endera or a workshop approved by Endera, the cost of such delivery and return delivery shall be at Customer's expense. All warranty work performed by a third party is subject to Endera's prior approval, and examination upon completion.

5.2 Exclusive Remedy

The remedy under the Limited Warranty as set forth above is the sole and exclusive responsibility and obligation of Endera to Customer under this Limited Warranty, and is also the sole and exclusive remedy of Customer for the Vehicle or Vehicle Component under this Limited Warranty.

Performance of Endera's warranty obligation under this Limited Warranty shall not extend the Limited Warranty Period. The original warranty periods shall still apply to the repaired Vehicle or repaired or replaced Vehicle Component. If the production of a Vehicle Component has been discontinued, withdrawn from the market, or is otherwise unavailable, Endera shall have the right to replace the Vehicle Component with a similar or superior type, the performance of which should not be lower than the original type.

6. Limitation of Liability

6.1 Notwithstanding anything to the contrary herein, the warranties set forth in this Limited Warranty are in lieu of all other warranties, whether express, implied, or statutory, including but not limited to any implied warranties of merchantability, fitness for a particular purpose or non-infringement. However, if Customer is identified as a "consumer" and the Vehicle or Vehicle Component as a "consumer product" in accordance with the laws governing the protection of consumer rights in the country where the vehicle was originally delivered by Endera to the original Customer, to the extent required by applicable law, any implied warranties of merchantability, fitness for a particular purpose or non-infringement are limited to the Limited Warranty Period set forth above, or such shorter period set forth in applicable law. This Limited Warranty gives Customer specific legal rights, and Customer may also have other rights that vary by state, province or jurisdiction, and such other rights shall remain unaffected.

6.2 Unless otherwise provided by applicable mandatory law, Endera shall not be liable for any of the following losses: a) personal injury or property damage; b) any other loss or injury whatsoever arising out of or in connection with the Vehicle or Vehicle Components (including but not limited to any defects in the Vehicle or Vehicle Components or arising from the use or installation thereof); and c) any incidental, consequential or special damages resulting from any cause. Endera's liability for fraudulent or willful intent, gross negligence or personal injury, in each case, under applicable mandatory liability law shall remain unaffected. Notwithstanding any other provision of this Limited Warranty and including if Endera is liable to compensate Customer hereunder, the total compensation paid or payable by Endera, and the total liability of Endera hereunder, shall not exceed the amount actually received by Endera as indicated in the original sales agreement for the Claim Vehicle or Vehicle Component. The limitations of liability under this Limited Warranty will



not apply to the extent restricted or prohibited by applicable mandatory law.

6.3 Customer acknowledges that the foregoing limitations on liability are an essential element of the relevant sale contract between the parties and that in the absence of such limitations the purchase price of the relevant Vehicle or Vehicle Component would be substantially higher.

6.4 Endera has adopted reasonable methods such as bolding, blackening and highlighting to draw the Customer's attention to clauses which exclude or limit its liability under this Limited Warranty, and have fully explained the relevant clauses as required by Customer. There is no disagreement between the parties over the understanding of any clause of this Limited Warranty.

7. Assignment of Warranty

Upon written notice to Endera, Customer may assign this Limited Warranty to an affiliate of Customer or a new owner of the Vehicle, provided that: (i) there is no outstanding payment due under the sale contract and (ii) the assignee agrees to be bound by these Limited Warranty terms. If requested by Endera, Customer shall provide reasonable evidence of such succession or transfer of ownership. This Limited Warranty may not otherwise be assigned or transferred, and any attempt to assign or transfer in violation of this Section 7 shall be null and void.

8. Miscellaneous

8.1 Severability

If any portion or provision of this Limited Warranty is held to be invalid, illegal or unenforceable under applicable law, or the application of such portion or provision to certain persons or in certain circumstances is held to be invalid, illegal or unenforceable, then the portion or provision shall be deemed to be changed and interpreted to accomplish the objectives of such portion or provision to the greatest extent possible under applicable law and the remaining portions or provisions of this Limited Warranty or the applicability of this Limited Warranty will remain unaffected, independent and valid.

8.2 Force Majeure

Endera shall not be responsible or liable in any way to Customer for any non-performance or delay in Endera's performance of its obligations under this Limited Warranty due to occurrences of any force majeure event, which is an event or circumstance that is not reasonably foreseeable, is beyond the reasonable control of and is not caused by the negligence or lack of due diligence of Endera. Such events or circumstances may include, but are not limited to: actions or inactions of any governmental authority or any civil, tribal, or military authority, acts of God, war, riot or insurrection, terrorism, blockades, embargoes, sabotage (including arson and vandalism), epidemics, pandemics, natural disasters, including but not limited to lightning, hail, frost, snow, storms, tidal waves, floods, fire or explosion, extreme temperatures, earthquakes, typhoons, tornadoes, volcanic eruptions, meteorites, ground motions, earth fissures, landslides, animal damage, hurricanes, or other unusually severe weather events, strikes, lockouts or other labor disputes, unavailability of suitable or sufficient labor, material, or capacity or technical or yield failures and any other unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood by Endera at the time of the sale of the Vehicle or Vehicle Components or the notification by Customer of the relevant warranty claim. Notwithstanding that the COVID-19 pandemic initiated prior to delivery of the Vehicle,



its effect on global supply chains, manufacturing and the economy are ongoing. In light of this, the COVID-19 pandemic and its effects may cause delays and constitute a force majeure event.

8.3 Governing Law and Dispute Resolution

Any dispute related to or arising out of this Limited Warranty, including without limitation any question regarding its existence, validity, breach, or termination, shall be referred to and finally resolved pursuant to the governing law clauses and dispute resolution procedures under the terms of sale between the original purchaser and Endera.



FlexTech



INTERMOTIVE
VEHICLE
CONTROLS

An ISO 9001:2015 Registered Company

FlexTech™

Programmable Electrical System

Overview

- Foundation of the system is a Programmable Relay Power Center
- Can add optional modules to create an entire custom control system
- Connects electronic modules through the overall vehicle network, reducing the need for wiring
- Uses real-time chassis data to control loads
- Simple plug and play connections to the OEM chassis

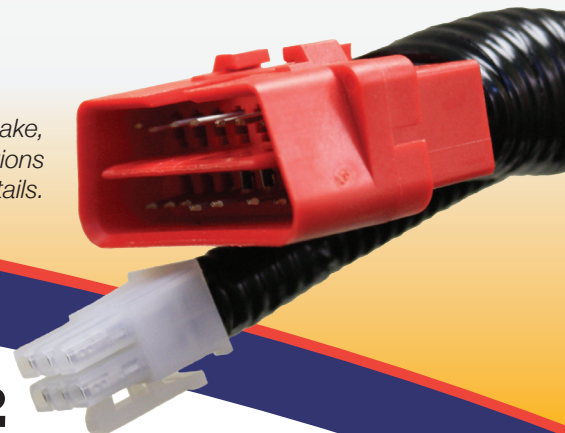
Features

- Centralizes and improves diagnostic capabilities; eliminates the need for timers, flashers, latching relays and multi-relay logic
- Access to InterMotive's graphical interface allows for customization of the entire system
- Communicates with Ford and Chevy CAN as well as J1939
- Warning LEDs offer easy troubleshooting
- Utilizes Upfitter Interface Module® technology
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings



Watch
FlexTech
in action

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

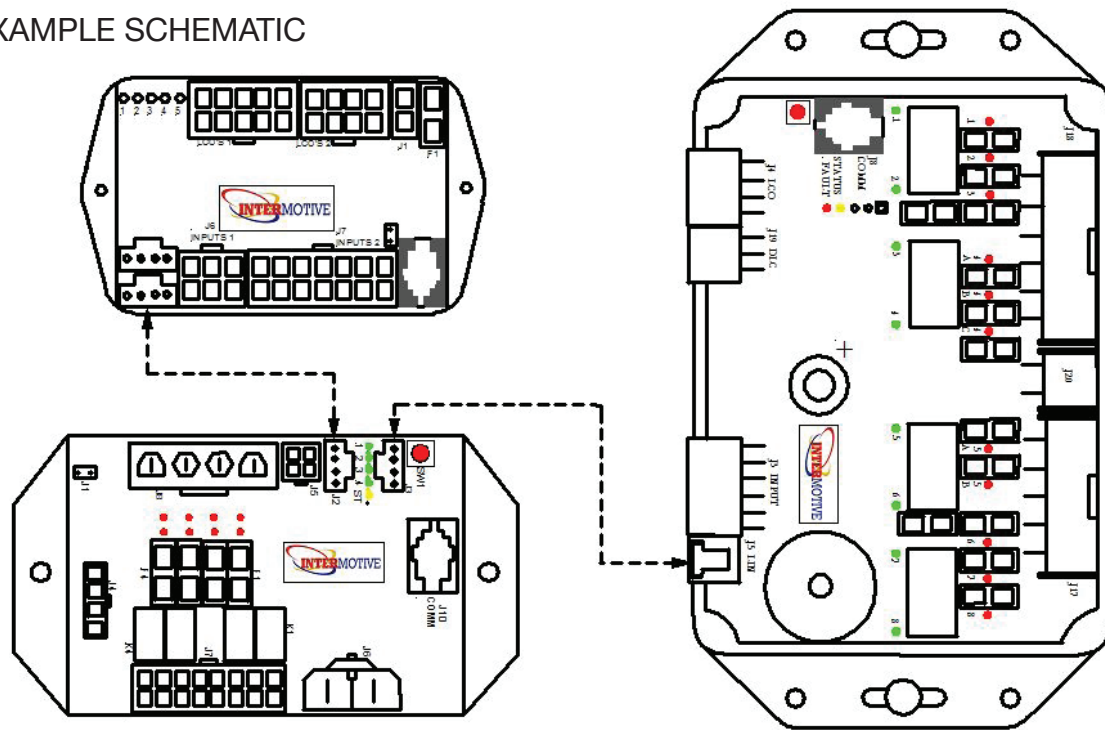


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LGS GROUP
AUTOMOTIVE TECHNOLOGIES

(775) 831-2002

Details

EXAMPLE SCHEMATIC



COMPONENTS

Programmable Relay Power Board (PRPC)

- Eight programmable relay power outputs
- Ten separate digital inputs
- Eight programmable low-current outputs:
Seven sourcing (0.5 A), one sinking (0.5 A)
- Outputs can be configured as momentary, latching, flashing or timed
- Easy diagnostics with LED indicators
- Programmable audible patterns for multiple uses

Expansion Board (Optional)

- Four 10 A relay fused outputs
- Four 1 A low-current outputs
- Four active low outputs
- Loads controlled by the PRPC

Switch Backer Board, SBB4/SBB8 (Optional)

- Controls system inputs and outputs
- Four or eight switches and light outputs
- Two switch backer boards of either size can be used together
- Six outputs: Two 1 A and four 0.5 A
- Compatible with any brand of switches

Other Module Options

- Gateway: Compliant FMVVS 403/404 wheelchair interlock and high idle system
- Advanced Fast Idle System (AFIS): Adjustable system with battery charge protection and optional air conditioning auto trigger
- BrakeMax: Tow haul mode for reduced brake wear and increased transmission durability for heavily loaded vehicles

4

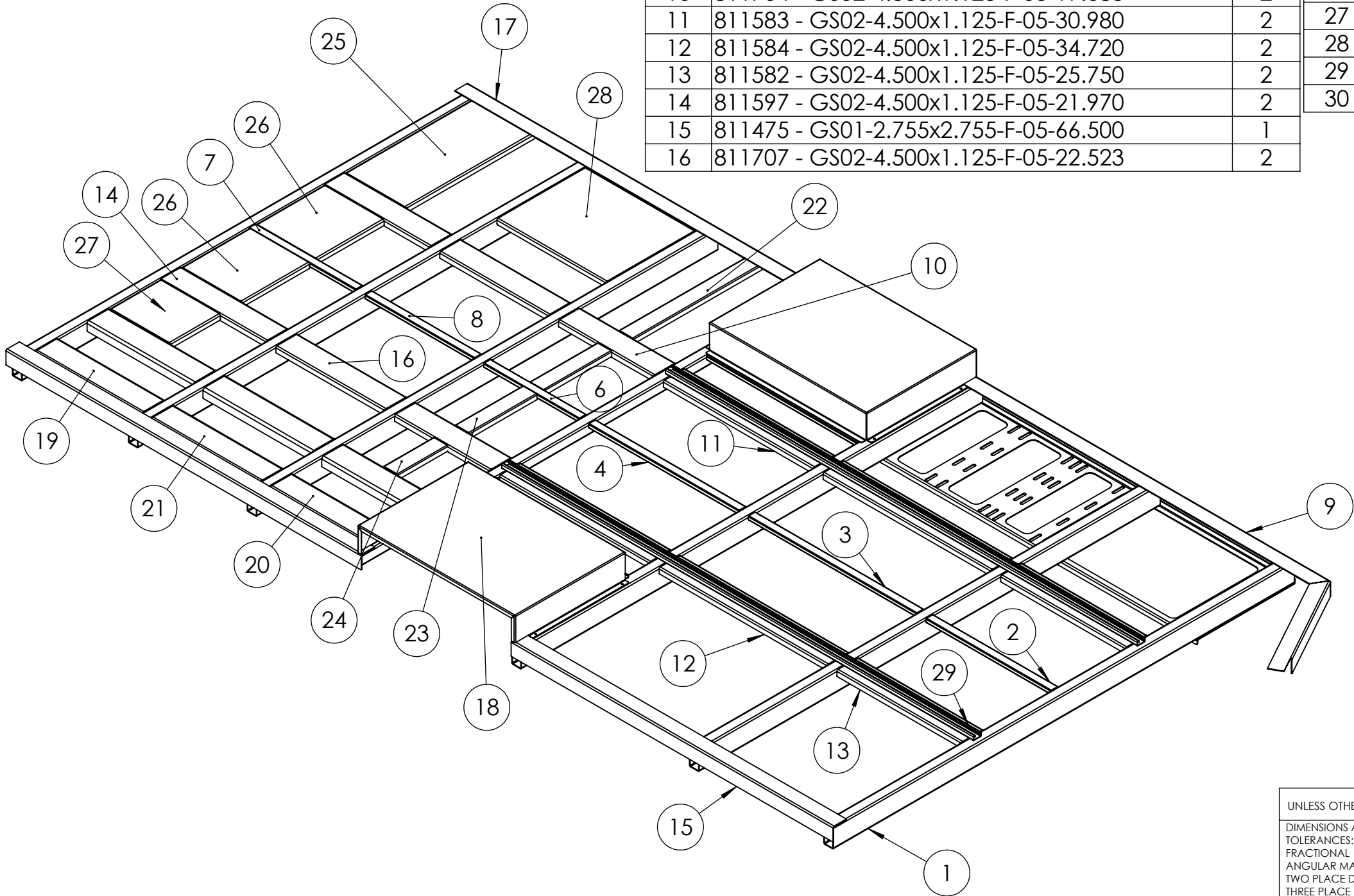
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2

1

ITEM NO.	PART NUMBER	QTY.
1	810562 - GS04-2.000x4.000-S-04-95.250 - Tube	6
2	811588 - GS04-1.500x0.750-S-08-25.750 - Tube	1
3	811590 - GS04-1.500x0.750-S-08-34.720 - Tube	1
4	811589 - GS04-1.500x0.750-S-08-30.980 - Tube	3
5	810578 - GS03-2.000x2.000-S-04-95.250 - Tube	1
6	811704 - GS04-1.500x0.750-S-08-19.683	1
7	811594 - GS04-1.500x0.750-S-08-21.970 - Tube	1
8	811706 - GS04-1.500x0.750-S-08-22.523 - Tube	1
9	811476 - GS01-2.755x2.755-F-05-97.640	1
10	811704 - GS02-4.500x1.125-F-05-19.683	2
11	811583 - GS02-4.500x1.125-F-05-30.980	2
12	811584 - GS02-4.500x1.125-F-05-34.720	2
13	811582 - GS02-4.500x1.125-F-05-25.750	2
14	811597 - GS02-4.500x1.125-F-05-21.970	2
15	811475 - GS01-2.755x2.755-F-05-66.500	1
16	811707 - GS02-4.500x1.125-F-05-22.523	2

ITEM NO.	PART NUMBER	QTY.
17	811692 - GS01-2.755x2.755-F-05-73.390	2
18	811335 - Wheel Well 32 Wide - 14GA	2
19	811598 - GS02-4.750x1.750-F-03-21.970	2
20	811705 - GS02-4.750x1.750-F-03-19.683	2
21	811708 - GS02-4.750x1.750-F-03-22.523	2
22	811578 - GS02-3.000x1.000-F-07-28.450	1
23	811577 - GS02-3.000x1.000-F-07-13.930	2
24	811576 - GS02-3.000x1.000-F-07-10.310	1
25	811650 - GS07-12.000x1.000-F-05-28.450	1
26	811694 - GS07-12.000x1.000-F-05-13.930	2
27	811695 - GS07-12.000x1.000-F-05-10.310	1
28	811696 - GS07-18.000x1.000-F-05-22.523	1
29	184624-00-515	2
30	810893 - Universal Condenser Mount	1



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/4$
ANGULAR MACH ± 1
TWO PLACE DECIMAL ± 0.0625
THREE PLACE DECIMAL ± 0.03125

	NAME	DATE
DRAWN	JMB	5/24/2023
QUANTITY		
MATERIAL		
THICKNESS		
FINISH	GALV.	
DO NOT SCALE DRAWING		



TITLE:

SIZE
B

DWG. NO.
C24 158-WB Floor

REV
A

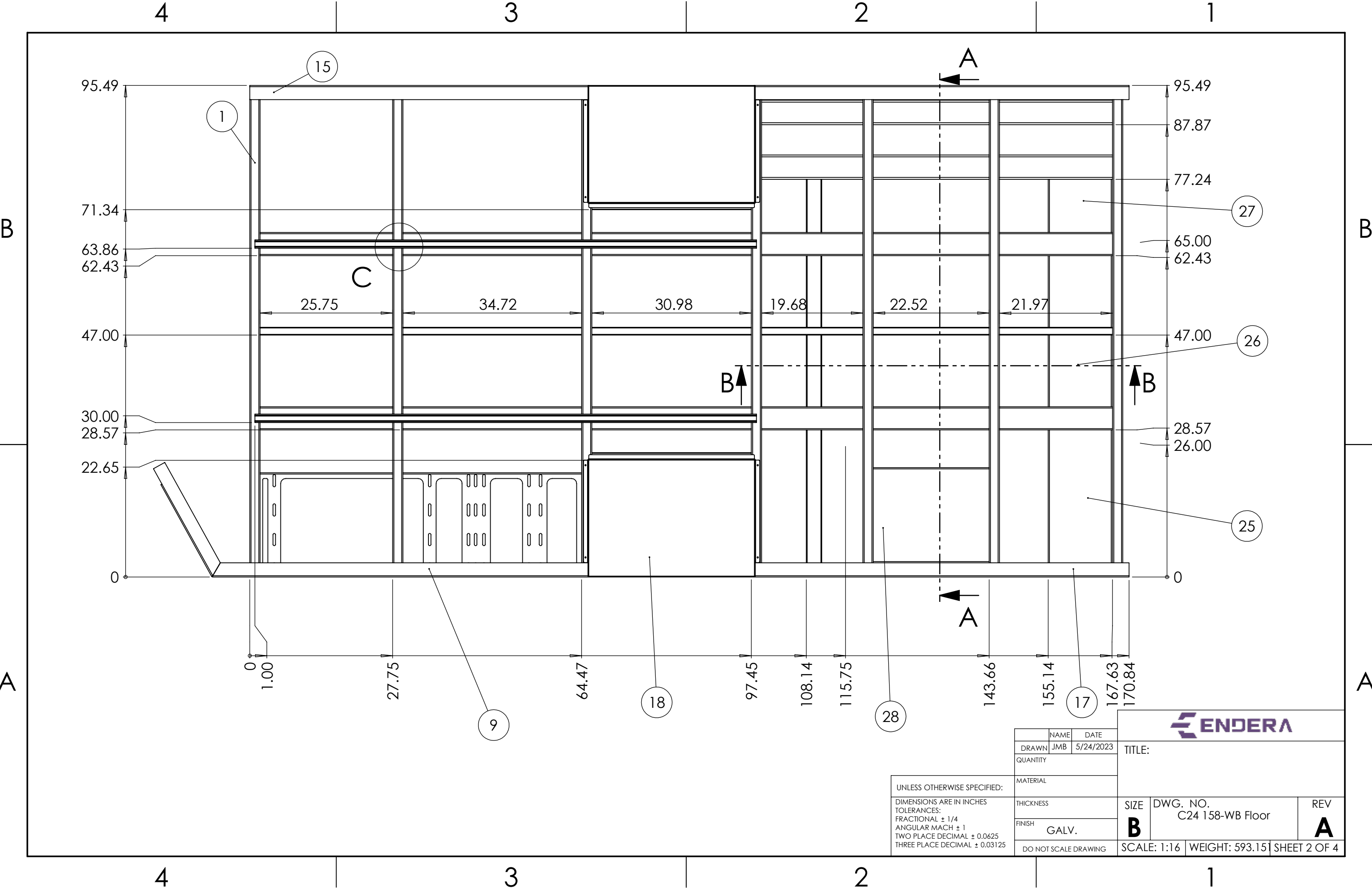
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4

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2

1



		NAME	DATE	TITLE:		
DRAWN		JMB	5/24/2023			
		QUANTITY				
UNLESS OTHERWISE SPECIFIED:		MATERIAL		SIZE B		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/4 ANGULAR MACH ± 1 TWO PLACE DECIMAL ± 0.0625 THREE PLACE DECIMAL ± 0.03125		THICKNESS				
		FINISH GALV.				
		DO NOT SCALE DRAWING		SCALE: 1:16	WEIGHT: 593.15	REV A
				SHEET 2 OF 4		

4

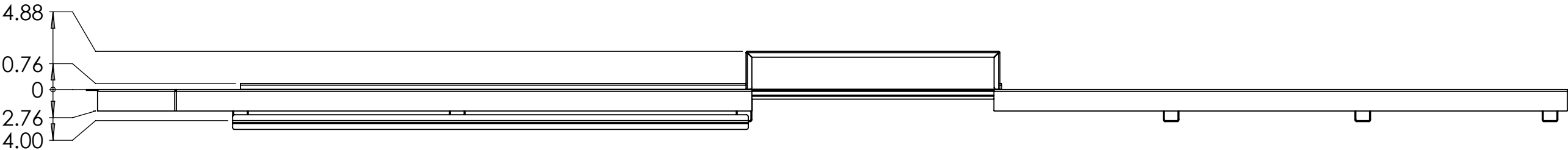
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2

1

B

B

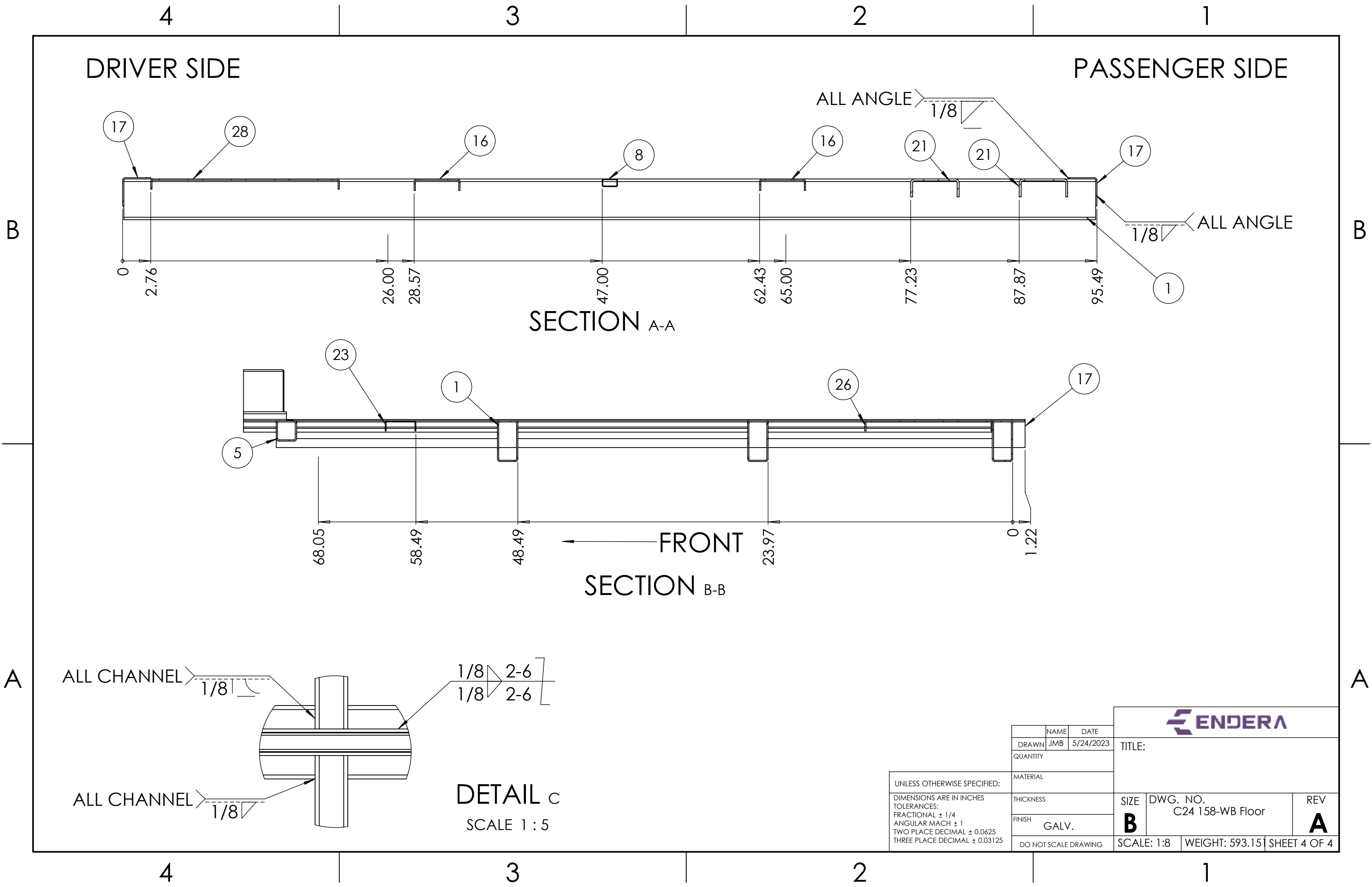


A

A



		NAME	DATE				
	DRAWN	JMB	5/24/2023	TITLE:			
	QUANTITY						
UNLESS OTHERWISE SPECIFIED:	MATERIAL						
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/4 ANGULAR MACH ± 1 TWO PLACE DECIMAL ± 0.0625 THREE PLACE DECIMAL ± 0.03125	THICKNESS			SIZE B	DWG. NO. C24 158-WB Floor		REV A
	FINISH GALV.						
	DO NOT SCALE DRAWING			SCALE: 1:15	WEIGHT: 593.15	SHEET 3 OF 4	



**ILISC: Intelligent Lift
Interlock System**

INTERMOTIVE

**VEHICLE
CONTROLS**

An ISO 9001:2015 Registered Company

Intelligent Lift Interlock System™

ILISC: Shift Interlock for Manual Doors

Overview

- Prevents the vehicle from shifting out of Park if the wheelchair lift or ramp is in use or until properly stowed
- Prohibits lift operation unless the vehicle is in a secure state
- 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

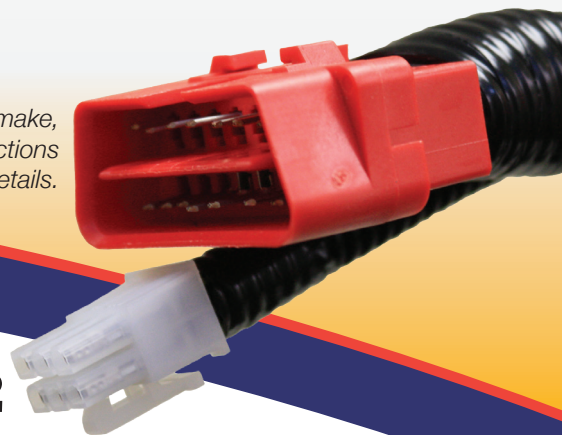
Features

- Dash-mounted LED display panel provides system status
- Allows the lift to be operated from outside with the engine off
- Optional vehicle lockdown while passenger door is open
- 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.

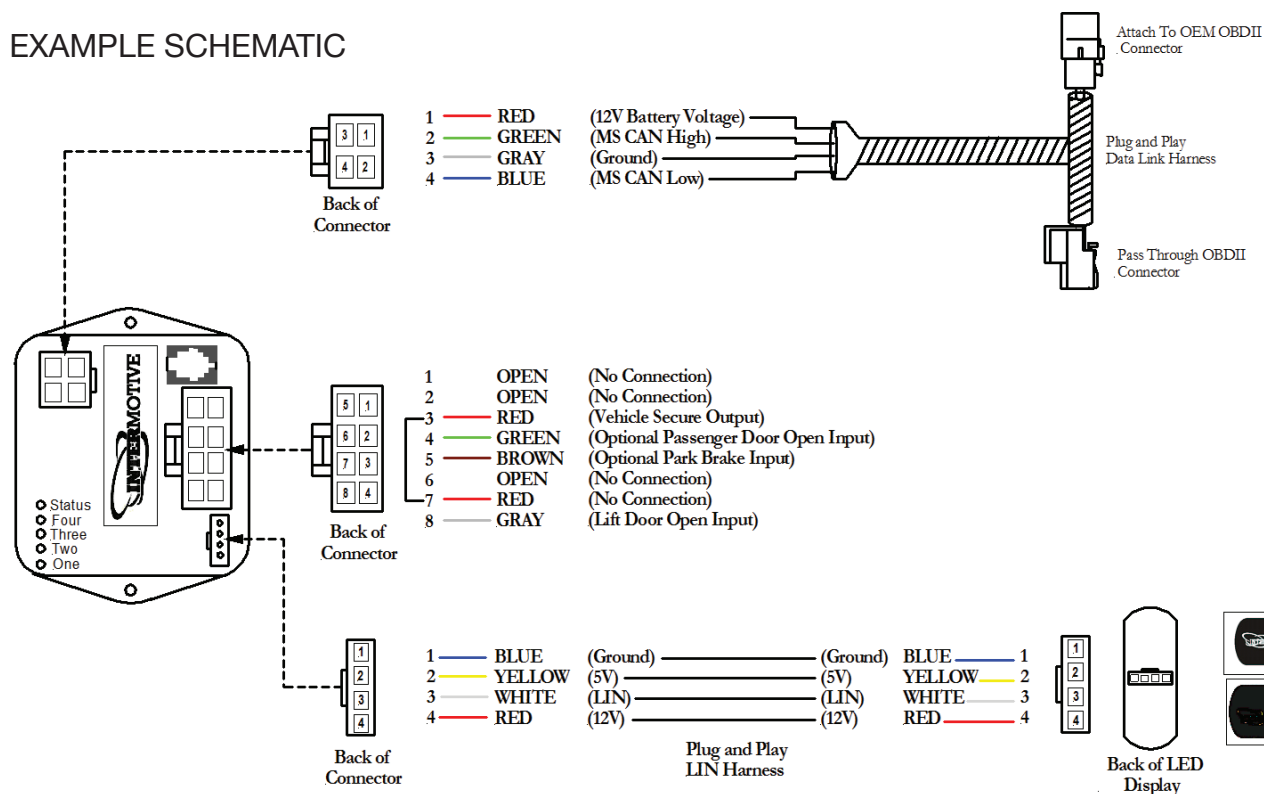
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(775) 831-2002



Details

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Three active low (lift door open, Park Brake and passenger door open)
Number of Outputs	Two high/low (vehicle secure and shift lock)
Current Draw	70 mA
Quiescent Draw	3 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	3" L x 2" W x 1" H

2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515



Client Proposal

Prepared by:

Mark Prohaska

Office: 641-923-2855

Quote ID: End158A.25

Date: 05/28/2024



Pritchard Commercial Sales | 1400 South 24th Street Suite B, Clear Lake, Iowa, 50428

Office: 641-923-2855



2025 E-450 Cutaway Chassis 158" WB DRW Base (E4F)

Price Level: 515 | Quote ID: End158A.25

Warranty

Standard Warranty

<i>Basic Warranty</i>	
Basic warranty	36 months/36,000 miles
<i>Powertrain Warranty</i>	
Powertrain warranty	60 months/60,000 miles
<i>Corrosion Perforation</i>	
Corrosion perforation warranty	60 months/unlimited
<i>Roadside Assistance Warranty</i>	
Roadside warranty	60 months/60,000 miles

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.



+1 307.776.9402
804 N Pratt St.
Ottawa, Ohio 45875

5/28/2024

The Endera commercial shuttle bus is manufactured in Ottawa, Ohio. Our bus is Buy America compliant and has been Altoona Tested in the 7yr/200,000 mile category.

Endera is a vertically integrated transportation technology company specializing in commercial ICE and electric vehicles, charging stations and software solutions.

American made, we design and manufacture ICE and electric vehicles and provide services that leverage leading technologies. With one of the lowest total costs of ownership over other commercial electric vehicle offerings, Endera is first to market with a sustainable solution that rivals its fossil fuel counterparts in price, technology, longevity, profitability and service.



Don White
Bid Coordinator/Sales Manager

BID FORM #2

CERTIFICATION FOR AIR & WATER POLLUTION

The Vendor certifies that the vehicles proposed:

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

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

Date

Authorized Signature

Title

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #3

**DISADVANTAGED BUSINESS ENTERPRISE
VENDORS/ MANUFACTURERS CERTIFICATION**

(Check appropriate statement)

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

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

5/28/2024

Date

Don White

Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #4

**BUY AMERICA CERTIFICATION
ROLLING STOCK**

Certificate of Compliance

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

5/28/2024

Date



Authorized Signature

Endera (Manufacturer)

Company Name

Don White

Name

Bid Coordinator

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
<30' Length Cutaway Bus

BID FORM #5

**FEDERAL MOTOR VEHICLE
SAFETY STANDARDS CERTIFICATION**

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

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

Endera (Manufacturer) hereby certifies that it

 IS or

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

BID FORM #7

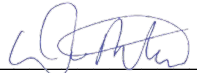
**CERTIFICATION OF PRIMARY PARTICIPANT REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third-party contract),
Endera (Manufacturer) _____ (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),
Endera (Manufacturer) _____, 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.



Bid Coordinator
Signature and Title of Authorized Official

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #8

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

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

SPECIFICATION COMPLIANCE

NOTE: Please check if what is offered is in exact compliance with specifications. **Any discrepancies required 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.**

 X 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
<30' Length Cutaway Bus

BID FORM #9

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title



+1-419-523-3593
804 N Pratt St.
Ottawa, Ohio 45875

TO: Whom It May Concern

RE: FMVSS & ADA Requirements Endera Automotive, LLC

This is to certify that bus models manufactured by Endera Automotive, LLC will be in full compliance with all current applicable FMVSS requirements. Some items are certified based on the incomplete vehicle document supplied by Ford.

Including:

- | | |
|------------------|--|
| A. FMVSS No. 101 | Controls and Displays |
| B. FMVSS No. 102 | Transmission Shift Lever Sequence, Starter Interlock, and
Transmission Braking Effect |
| C. FMVSS No. 103 | Windshield Defrosting and Defogging Systems |
| D. FMVSS No. 104 | Windshield Wiping and Washing Systems |
| E. FMVSS No. 105 | Hydraulic and Electric Brake Systems |
| F. FMVSS No. 106 | Brake Hoses |
| G. FMVSS No. 108 | Lamps, Reflective Devices, and Associated Equipment |
| H. FMVSS No. 111 | Rearview Mirrors |
| I. FMVSS No. 113 | Hood Latch System |
| J. FMVSS No. 116 | Motor Vehicle Brake Fluids |
| K. FMVSS No. 119 | New Pneumatic Tires |
| L. FMVSS No. 120 | Tire Selection and Rims for Motor Vehicles Other Than
Passenger Cars |
| M. FMVSS No. 124 | Accelerator Control Systems |
| N. FMVSS No. 125 | Warning Devices |
| O. FMVSS No. 205 | Glazing Materials |
| P. FMVSS No. 207 | Seating Systems |
| Q. FMVSS No. 208 | Occupant Crash Protection |
| R. FMVSS No. 209 | Seat Belt Assemblies |
| S. FMVSS No. 210 | Seat Belt Assembly Anchorages |
| T. FMVSS No. 217 | Bus Emergency Exits and Window Retention and Release |
| U. FMVSS No. 220 | Rollover Protection Test |
| V. FMVSS No. 302 | Flammability of Interior Materials |
| W. FMVSS No. 404 | Platform Lift Installations on Motor Vehicles |

Regards,

Scott Sanford

Endera Automotive, LLC

LABEL #4

MFD. BY: ENDERA MOTORS

OTTAWA, OH

DATE OF MFR. MO: 03 YR: 2022

GVWR: 6,577 KG 14,500 LB)

GAWR-FRONT:

2,268 KG 5,000 LB)

WITH LT225/75R16E TIRES,

16X6.0K RIMS, @ 520 KPA

(75 PSI) COLD SINGLE

GAWR-INTERMEDIATE (1):

KG LB)

WITH TIRES,

RIMS, @ KPA

(PSI) COLD ☐ SINGLE ☐ DUAL

GAWR-INTERMEDIATE (2):

KG LB)

WITH TIRES,

RIMS, @ KPA

(PSI) COLD ☐ SINGLE ☐ DUAL

GAWR-REAR:

4,355 KG 9,600 LB)

WITH LT225/75R16.0K TIRES,

16X6.0K RIMS, @ 550 KPA

(80 PSI) COLD ☐ SINGLE ☒ DUAL

THIS VEHICLE HAS BEEN COMPLETED
IN ACCORDANCE WITH THE PRIOR
MANUFACTURERS' I/D, WHERE APPLIC-
ABLE THIS VEHICLE CONFORMS TO ALL
APPLICABLE FEDERAL MOTOR VEHICLE
SAFETY STANDARDS, [AND BUMPER
AND THEFT PREVENTION STANDARDS,
IF APPLICABLE] IN EFFECT IN:

MO: MARCH YR: 2022

VEHICLE IDENTIFICATION NUMBER:

1FDFE4FN5NDC35530

VEHICLE TYPE: SHUTTLE BUS

S/N: F24WC210282

Endera / Metro Link References			
CURRY PUBLIC TRANSIT INC	<u>KATHRYN BERNHARDT</u>	<u>1-541-412-8806</u>	<u>RKBERNHARDT@CURRYPUBLICTRANSIT.ORG</u>
Basin Transit Service	Craig Johnston	541-883-2877	cjohnston@basintransit.com
Malheur Council	Brittany White	541-888-0000	brittany.white@mcoacs.org
Grant County Transportation District	Angie Jones	541-575-2370	peoplemover@outlook.com
Mid-Columbia Economic Development District	Jessica Metta	541-288-9305	jessica@mcedd.org
Klickitat Senior Services	Sharon Carter	509-493-3068	sharonc@klickitatcounty.org

BID FORM #2

CERTIFICATION FOR AIR & WATER POLLUTION

The Vendor certifies that the vehicles proposed:

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

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

Date

Authorized Signature

Title

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #3

**DISADVANTAGED BUSINESS ENTERPRISE
VENDORS/ MANUFACTURERS CERTIFICATION**

(Check appropriate statement)

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

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

5/28/2024

Date

Don White

Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #4

**BUY AMERICA CERTIFICATION
ROLLING STOCK**

Certificate of Compliance

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

5/28/2024

Date



Authorized Signature

Endera (Manufacturer)

Company Name

Don White

Name

Bid Coordinator

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
<30' Length Cutaway Bus

BID FORM #5

**FEDERAL MOTOR VEHICLE
SAFETY STANDARDS CERTIFICATION**

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

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

Endera (Manufacturer) hereby certifies that it

 IS or

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

BID FORM #7

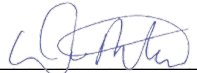
**CERTIFICATION OF PRIMARY PARTICIPANT REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third-party contract),
Endera (Manufacturer) _____ (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),
Endera (Manufacturer) _____, 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.



Bid Coordinator
Signature and Title of Authorized Official

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #8

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

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

SPECIFICATION COMPLIANCE

NOTE: Please check if what is offered is in exact compliance with specifications. **Any discrepancies required 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.**

 X 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
<30' Length Cutaway Bus

BID FORM #9

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

CONTENTS

OBJECTIVE	1
RESPONSIBILITIES	1
PERFORM LEAK TEST	1
END OF PROCESS	2

OBJECTIVE

1. To define the process of performing leak test on completed vehicles.

RESPONSIBILITIES

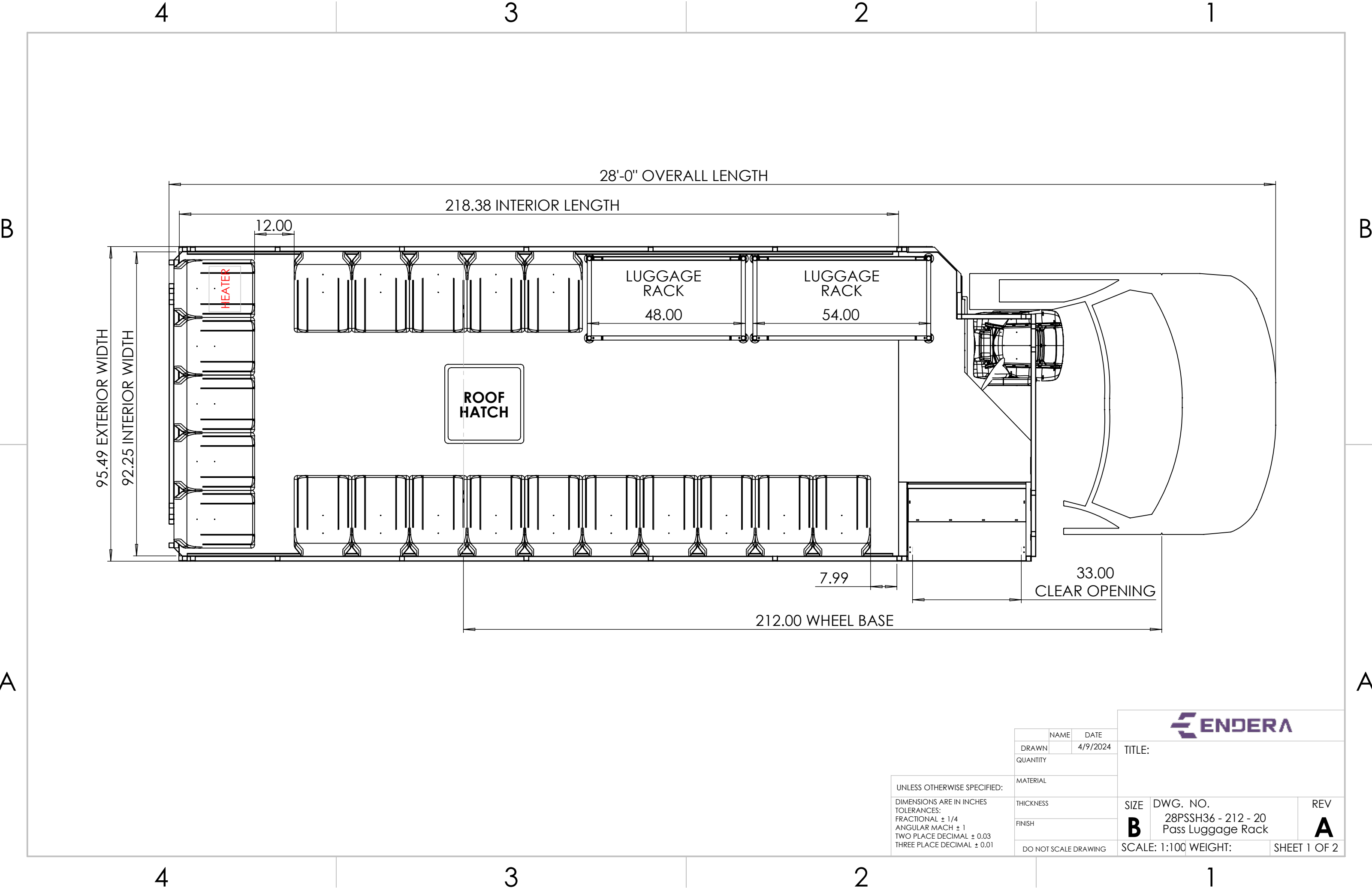
2. Manufacturing management is responsible for assigning the properly qualified employees to perform leak testing.
3. The inspector is responsible for conducting the leak test and properly completing the inspection forms.
4. The Quality department is responsible for the oversight and management of the leak test process.

PERFORM LEAK TEST

5. Use the proper form for the vehicle being tested:
 - 5.1 F-QLT-0020 for 4 section school bus.
 - 5.2 F-QLT-0021 for 5 section school bus.
 - 5.3 F-QLT-0015 for 6 section school bus.
 - 5.4 F-QLT-0004 for 24' commercial bus.
 - 5.5 F-QLT-0005 for 28' commercial bus.
6. Enter the job #, VIN #, date, and name on the form.
7. Circle yes/no if the vehicle has a wheelchair lift.

8. Ensure all doors, windows, hatches etc. are closed.
9. Perform the leak test:
 - 9.1 Turn on the water valve.
 - 9.2 Verify that water is spraying.
 - 9.3 Back the bus into the spray booth.
 - 9.4 Using a light, inspect all interior areas for leaks.
 - 9.5 Identify any leaks on the inspection form by circling the area.
 - 9.6 If more than one leak is found, number the circles, starting with 1.
 - 9.7 Allow the system to spray for 30 minutes. Note that the inspector stays inside the bus for the duration of the test.
 - 9.8 Drive the bus out of the booth.
 - 9.9 Shut off the water valve.
 - 9.10 If no leaks are found, file the completed form with the job traveler.
 - 9.11 On the back of the form, check the appropriate box under "Test Results".
 - 9.12 Investigate the root cause of any leak(s) and repair as necessary.
 - 9.13 On the back of the form, enter the leak # and the corrective action taken by describing the repair.
10. Notify the line manager if assistance is needed to make the proper repairs.
11. After repairs are completed, perform another leak test as noted in item 9 above.
12. Repeat the process until no leaks are identified.
13. When the vehicle passes inspection, the inspector files the completed form with the traveler.
14. The inspector notifies the line manager that the bus has passed inspection.

END OF PROCESS



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/4$
ANGULAR MACH ± 1
TWO PLACE DECIMAL ± 0.03
THREE PLACE DECIMAL ± 0.01

	NAME	DATE
DRAWN		4/9/2024
QUANTITY		
	MATERIAL	
	THICKNESS	
	FINISH	
	DO NOT SCALE DRAWING	



TITLE:

SIZE
B

DWG. NO.
28PSSH36 - 212 - 20
Pass Luggage Rack

REV
A

SCALE: 1:100 WEIGHT:

SHEET 1 OF 2

							FUEL LOAD ADJ. DATA (F.L.A.)				
	VEHICLE DESCRIPTION		FRONT AXLE		REAR AXLE		FUEL CAP.	FUEL WGT PER GAL.			
	28PSSH36-212-20 Luggage Racks		3380	6100			55	6			
	WB	PER IN. VALUE CALC.	AXLE WEIGHTS				FUEL AMT.	WGT OF FUEL	FUEL ADJ. AMT.		
	212	0.47	LEFT FRONT	RIGHT FRONT			1.00	330	-330.00		
	AXLE CAPACITIES		2210	1974			FUEL TANK CENTER				
	FRONT	REAR	TOTAL	LEFT REAR	RIGHT REAR		202.63				
	5000	9600	14500	2635	2969						
	STREETSIDE					CURBSIDE					
DESC.	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DESC.
DRIVER	44	150	20.75%	118.87	31.13			0.00%	0.00	0.00	
			0.00%	0.00	0.00	97.19	176.25	45.84%	95.45	80.80	
Luggage 54"	97.1	150	45.80%	81.30	68.70	114.69	176.25	54.10%	80.90	95.35	
Luggage 48"	150.41	150	70.95%	43.58	106.42	132.19	176.25	62.35%	66.35	109.90	
			0.00%	0.00	0.00	149.69	176.25	70.61%	51.80	124.45	
FW Low	184.69	176.25	87.12%	22.70	153.55	167.19	176.25	78.86%	37.25	139.00	
FW Low	200.12	176.25	94.40%	9.88	166.37	184.69	176.25	87.12%	22.70	153.55	
FW Low	219.62	176.25	103.59%	-6.34	182.59	202.19	176.25	95.37%	8.16	168.09	
FW Low	237.12	176.25	111.85%	-20.88	197.13	219.69	176.25	103.63%	-6.39	182.64	
FW Low	254.62	176.25	120.10%	-35.43	211.68	237.19	176.25	111.88%	-20.94	197.19	
			0.00%	0.00	0.00	254.69	176.25	120.14%	-35.49	211.74	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
2 FW Low	287.54	352	135.63%	-125.42	477.42	287.54	352	135.63%	-125.42	477.42	
1/2 Seat FW Low	287.54	88.125	135.63%	-31.40	119.53	287.54	88.125	135.63%	-31.40	119.53	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
TOTAL PASSENGER LOAD				56.85	1714.53				142.97	2059.66	3974.00
	AXLE WEIGHTS			2210.00	2635.00				1974.00	2969.00	9788.00
	No Lift, Valeo 70k Rooftop Condesner;										
				FRONT	REAR	LEFT/RIGHT TOTALS	LEFT/RIGHT %'S				
			LEFT	2266.85	4349.53	6616.38	0.481		ICE 28' 212"WB		
			RIGHT	2116.97	5028.66	7145.63	0.519				
			FRT / REAR TOTALS	4383.81	9378.19	13762.00			ESTIMATION		
			AXLE CAPACITIES	5000	9600	14500					
			AVAILABLE CAPACITIES	616.19	221.81	738.00					



ENDERA ORDER FORM

+1 419.523.3593
804 N. Pratt St.
Ottawa, OH 45875

Date:

Sales: 303-880-2788
reid@enderacorp.com
Warranty / Parts: 419-523-3593

CUSTOMER INFORMATION

SHIPPING / PAYMENT INFORMATION

Customer:
Address:
City, St. Zip:
Contact:
Phone:
Fax:
P.O. #:

Customer Pick Up: ☐ Ship Best Way to Location Below: ☐

Ship To:
Address:
City, St. Zip:
Contact:
Phone:
Payment:

Additional
Shipping
Instructions

ARE FTA FUNDS USED?		FTA INFO REQUIRED
YES or NO	<input type="text"/>	

Is this for a contract?	YES or NO	Model Number:	Number of units in this order:
	<input type="text"/>	Description: 20 Perimeter	
		Seating Capacity:	
If YES please complete the fields to the right			3

End User Information

Name:
Address:
City, St. Zip:

Applicable FIN / FAN Code:

Pricing and specs subject to change without notice - COD or approved financing only - FOB Ottawa, OH

CHASSIS PRICING

QTY	CHASSIS PRICE ADDED	Price	Extended
	Ford E450, 176" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Ford E450, 158" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Chassis Transfer Fee	Transferring Chassis To What Dealer	
	Less: Applicable Government Bid Assistance		
	Less: Applicable Fleet Allowance		
	Less: Applicable Commercial Retail Allowance		
	Less: Commercial Upfit Allowance		
	Less: Mobility Allowance		
	Less: PNI Allowance		
	Total Net Chassis (Plus any special options noted below):		
	Grand Total Net Chassis Price:		

BASE CONVERSION				
QTY			Price	Extended
Endera - FORD E450 - Standard Floor				
	1	28' E450, 212" WB, 14,500 GVWR		
BODY / CONVERSION OPTIONS				
Option #	QTY	Option Description	Price	Extension
		MISCELLANEOUS PARATRANSIT ACCESSORIES		
	1	Hazard Lights to flash when wheelchair door is opened		
		FLOORING		
	1	Gerflor Tarabus Sirius CONFIRM COLOR AT ORDER, 2.5 mm Thick		
	1	Yellow Step Nosing (order grit style)		
	1	Standee Line Behind Driver at Entrance Stanchion w/ Decal		
	1	Heated Entry Step-Well		
	1	Aluminum subfloor		
	1	3/4" Marine Grade Plywood		
		ELECTRICAL		
	1	Red Indicator Lights above each Emergency Exit (Total of 4)		
	1	Back Up Alarm		
	1	Pull Cord Passenger Stop Indicator with Touch Tape		
	1	Stop Request Sign in Driver's Area		
	1	Two Way Radio prep Package (no hot wire, pull cord, ground, and conduit only)		
	1	Skirt Mounted Battery Box with Slide Out Battery Tray - Stainless		
	1	Hour Meter		
	1	Digital Clock installed above front bulkhead door (visible to passengers)(8"X3" min)		
		EXTERIOR LIGHTS		
	1	Midship Turning Lights		
	1	Fog Lamps		
	1	Strobe light roof mounted		
	1	Additional Exterior WC Door Light		
		AUDIO / VISUAL		
	1	Radio AM/FM/USB/BT-OEM Ford		
	1	Rosco Backup Camera with 7" Monitor		
	1	PA - 40 Watt Panel Mount System wired to speaker, Gooseneck Microphone, External Speaker		
	1	Intermotive Fast Idle (AFIS), No Interlock		
	1	AngelTrax Vulcan V12 HDIP Mobile DVR 6 Camera System with 1TB hardrive		
	1	Lockable box to mount DVR System		
	1	2 additional speakers (6 total for pax compartment)		
		DOORS / WINDOWS		
	1	Transign Front Destination Sign		
	1	Transign Side Destination Sign		
	1	Vented Windows with Flush Side Slider (All windows)		
	1	Hold Open Latch for bulkhead storage compartment		
		CHASSIS / EXTERIOR		
	1	Heavy Duty 12" Driver's Step		
	1	Front Mud Flaps		
	1	MorRyde RS Rear Suspension		
	1	Exterior Mirrors, Rosco Remote Power - Heated, RH & LH, Black Arms (Exchange)		
	1	Locking Fuel Fill Door		
	1	Valve Stem Extender Inner Dual Rear Wheel, pair		
	1	Alignment Certification Post-Production		
	1	Intermotive EMS System (engine monitoring and shutdown system		

	1	2" Rubber Rub Rail installed at floor level		
		SIDEWALL / CEILING / HATCH		
	1	Roof Hatch - Transpec 1075 Series Dual Purpose Safety Vent II to Match Ceiling		
		INTERIOR		
	1	Interior Flat Mirror 6" x 16"		
	1	Farebox pre-wire to modesty panel behind driver		
	1	Fresnal Lens on flat mirror		
		LUGGAGE RACKS / STORAGE		
	1	54" Interior Luggage Rack, 2 Shelves w/ Carpet		
	1	60" Interior Luggage Rack, 2 Shelves w/ Carpet		
		CLIMATE CONTROL		
		VALEO CLIMATE CONTROL A/C SYSTEMS		
		Valeo DUAL COMPRESSOR SYSTEMS - SKIRT CONDENSER		
	1	90K BTU Total - Valeo-R476021 - Dual Compressors, Skirt Cond., Ceiling Evap.		
		CABIN HEATERS		
	2	Valeo Rear Heater-65K BTU, 3 Speed - <i>Only Available with Perimeter Seating</i>		
		MISCELLANEOUS - HEATER & A/C ACCESSORIES & FANS		
	1	Heater Booster Pump, Includes Electric Water Valve in lieu of Manual Valves		
	1	Defroster Fan - Mounted in Driver's Area		
		SAFETY OPTIONS		
	1	5 Lb. ABC Fire Extinguisher w/ Bracket		
	1	Bi-Directional Reflective Triangles		
	1	25 Unit First Aid Kit w/ Plastic Waterproof Case, ANSI 2009		
	1	Bloodborne Pathogen Kit / Body Fluid Kit		
	1	Decal - "Please Fasten Your Seat Belt"		
	1	Decal - "Vehicle Height Sticker"		
	1	Decal - "No Smoking"		
	1	Decal - "Watch your step" placed on step riser		
	1	Decal - "In Emergency, Dial 911" Placed on driver modesty panel		
	1	Decal - "Emergency equipment" Ship loose		
		GRAB RAIL / STANCHION / PANELS		
	1	Ceiling Grab Rail Curbside (ADA requirement)		
	1	Ceiling Grab Rail Streetside		
	1	Stanchion Behind Driver with Modesty Panel and 1/4" Plexiglass Panel		
	3	Gray Padded Modesty Panel (each)		
	1	3-Padded Stanchion Poles-Vertical-Yellow		
		MISC OPTIONS		
	1	Ford E-450 Spare Tire (Placed Loose in Back of Bus)		
	2	Document protectors Mounted on front bulkhead		
	1	Tectil Undercoating		
	1	Set of Wheel Chocks		
		EXTERIOR GRAPHICS		
	1	Decal - "This vehicle stops at all railroad crossings"		
	1	Decal - "This vehicle makes frequent stops"		
	1	Decal - "Caution: Loading and Unloading Passengers" 1.25" white lettering on red background		
		SEATING		
		DRIVER'S SEATING		
	1	Ford OEM Driver's Seat, Recovered to Match Passenger Seats, Manual Pedestal		
	1	Adnik Power Seat Base w/ Skirt - Required w/ USSC G2, Shield & Shield Sport Driver Seats		
		OEM DRIVER SEAT RE-COVERED TO MATCH PASSENGER SEATS		
		FREEDMAN SHIELD & LO CAM DRIVER SEAT FABRICS		
		EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER		

	1	Driver Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	20	Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEATING			
		FREEDMAN FEATHERWEIGHT STANDARD RIGID SEATS			
	8	Featherweight Low Back Double Seat			
	2	Featherweight Low Back Single Seat			
		ICS - CHILD RESTRAINT SEATS <u>**REQUIRES WEIGHT ANALYSIS**</u>			
	1	Double Seat, (2) Integrated Child Seats			
		SEAT OPTIONS			
	1	ICS Seat instructions printed on seat in english and spanish			
		SEAT BELTS			
	20	Seat Belt, USR Freedman Retractable (Per Person) N/A Foldaway or Flip Seats			
	2	Seat Belt Extension, 12"			

		OTHER OPTIONAL EQUIPMENT & FEATURES			
	2	Parts book, operations manual, maintenance manual, wiring schematic	\$ -	\$ -	
	1	Certified Weight Slip	\$ -	\$ -	

PRODUCTION NOTES / INSTRUCTIONS					

TOTAL CONVERSION PRICE				
LESS MANUFACTURER DISCOUNT APPLIED				
NET CONVERSION PRICE				
TOTAL BUS PRICE (Includes Chassis)				
FREIGHT CHARGE (Minimum \$350.00)		Miles:		
PLEASE NOTE: Actual delivery fees are subject to change at time of shipment, due to fuel prices			\$	1.65
GRAND TOTAL BUS PRICE				
DEPOSIT				
NET DUE				

PLEASE SUBMIT FLOORPLAN WITH ORDER

_____ AUTHORIZED CUSTOMER SIGNATURE		Delivery Date Requested:	_____
_____ AUTHORIZED ENDERA AUTOMOTIVE SIGNATURE		Delivery Date Approved:	_____
			_____ DATE



ENDERA ORDER FORM

+1 419.523.3593
804 N. Pratt St.
Ottawa, OH 45875

Date:

Sales: 303-880-2788
reid@enderacorp.com
Warranty / Parts: 419-523-3593

CUSTOMER INFORMATION

SHIPPING / PAYMENT INFORMATION

Customer:
Address:
City, St. Zip:
Contact:
Phone:
Fax:
P.O. #:

Customer Pick Up: ☐ Ship Best Way to Location Below: ☐

Ship To:
Address:
City, St. Zip:
Contact:
Phone:
Payment:

Additional
Shipping
Instructions

ARE FTA FUNDS USED?		FTA INFO REQUIRED
YES or NO	<input type="text"/>	

Is this for a contract?	YES or NO	Model Number:	Number of units in this order:
	<input type="text"/>	Description:	
	<input type="text"/>	Seating Capacity:	
If YES please complete the fields to the right		12+2	10

End User Information

Name:
Address:
City, St. Zip:

Applicable FIN / FAN Code:

Pricing and specs subject to change without notice - COD or approved financing only - FOB Ottawa, OH

CHASSIS PRICING

QTY	CHASSIS PRICE ADDED	Price	Extended
	Ford E450, 176" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Ford E450, 158" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Chassis Transfer Fee		
	Transferring Chassis To What Dealer		
	Less: Applicable Government Bid Assistance		
	Less: Applicable Fleet Allowance		
	Less: Applicable Commercial Retail Allowance		
	Less: Commercial Upfit Allowance		
1	Less: Mobility Allowance		
	Less: PNI Allowance		
	Total Net Chassis (Plus any special options noted below):		
	Grand Total Net Chassis Price:		

BASE CONVERSION				
QTY			Price	Extended
Endera - FORD E450 - Standard Floor				
	1	24', E450, 158" WB, 14,500 GVWR		
BODY / CONVERSION OPTIONS				
Option #	QTY	Option Description	Price	Extension
PARATRANSIT OPTIONS				
	1	Rear Lift - ADA with Double Wheel Chair Doors, Windows, Shift Interlock & Lights		
BRAUN WHEELCHAIR LIFTS				
	1	Braun Century - NCL3454-2 Lift, 34"x54", 1000# with Front Pump & Safety Belt		
Q-STRAINT W.C. SECUREMENT KITS				
	2	Q-8100-A1T-L - QRT DELUXE Retractable Shoulder / Lap Belt Combo - L Track		
	2	Order with Scooter Kit		
	2	Retractable hieght adjusters		
MISCELLANEOUS PARATRANSIT ACCESSORIES				
	1	Q-Straint Belt Cutter (Ship Loose)		
	8	Q-Straint 14" Quick Strap/Webbing Loop		
	1	Hazard Lights to flash when wheelchair door is opened		
FLOORING				
	1	Gerflor Tarabus Sirius CONFIRM COLOR AT ORDER, 2.5 mm Thick		
	1	Yellow Step Nosing (order grit style)		
	1	Standee Line Behind Driver at Entrance Stanchion w/ Decal		
	1	Heated Entry Step-Well		
	1	Aluminum subfloor		
	1	3/4" Marine Grade Plywood		
ELECTRICAL				
	1	Red Indicator Lights above each Emergency Exit (Total of 4)		
	1	Back Up Alarm		
	1	Pull Cord Passenger Stop Indicator with Touch Tape		
	1	Stop Request Sign in Driver's Area		
	1	Two Way Radio prep Package (no hot wire, pull cord, ground, and conduit only)		
	1	Skirt Mounted Battery Box with Slide Out Battery Tray - Stainless		
	1	Hour Meter		
	1	Digital Clock installed above front bulkhead door (visible to passengers)(8"X3" min)		
EXTERIOR LIGHTS				
	1	Midship Turning Lights		
	1	Fog Lamps		
	1	Strobe light roof mounted		
	1	Additional Exterior WC Door Light		
AUDIO / VISUAL				
	1	Radio AM/FM/USB/BT-OEM Ford		
	1	Rosco Backup Camera with 7" Monitor		
	1	PA - 40 Watt Panel Mount System wired to speaker, Gooseneck Microphone, External Speaker		
	1	Intermotive Fast Idle (AFIS), No Interlock		
	1	AngelTrax Vulcan V12 HDIP Mobile DVR 6 Camera System with 1TB hardrive		
	1	Lockable box to mount DVR System		
	1	2 additional speakers (6 total for pax compartment)		
DOORS / WINDOWS				
	1	Rear Door (32"x54") - With Window		
	1	Transign Front Destination Sign		
	1	Transign Side Destination Sign		

	1	Vented Windows with Flush Side Slider (All windows)		
	1	<i>Hold Open Latch for bulkhead storage compartment</i>		
		CHASSIS / EXTERIOR		
	1	Heavy Duty 12" Driver's Step		
	1	Front Mud Flaps		
	1	MorRyde RS Rear Suspension		
	1	Exterior Mirrors, Rosco Remote Power - Heated, RH & LH, Black Arms (Exchange)		
	1	Locking Fuel Fill Door		
	1	Valve Stem Extender Inner Dual Rear Wheel, pair		
	1	Alignment Certification Post-Production		
	1	<i>Intermotive EMS System (engine monitoring and shutdown system)</i>		
	1	<i>2" Rubber Rub Rail installed at floor level</i>		
		SIDEWALL / CEILING / HATCH		
	1	Roof Hatch - Transpec 1075 Series Dual Purpose Safety Vent II to Match Ceiling		
		INTERIOR		
	1	Interior Flat Mirror 6" x 16"		
	1	Farebox pre-wire to modesty panel behind driver		
	1	<i>Fresnal Lens on flat mirror</i>		
		CLIMATE CONTROL		
		VALEO CLIMATE CONTROL A/C SYSTEMS		
		Valeo DUAL COMPRESSOR SYSTEMS - SKIRT CONDENSER		
	1	90K BTU Total - Valeo-R476021 - Dual Compressors, Skirt Cond., Ceiling Evap.		
		CABIN HEATERS		
	2	Valeo 70K BTU, 3 Speed-Mounted Under Seat With Shut Off Valves		
		MISCELLANEOUS - HEATER & A/C ACCESSORIES & FANS		
	1	Heater Booster Pump, Includes Electric Water Valve in lieu of Manual Valves		
	1	Defroster Fan - Mounted in Driver's Area		
		SAFETY OPTIONS		
	1	5 Lb. ABC Fire Extinguisher w/ Bracket		
	1	Bi-Directional Reflective Triangles		
	1	25 Unit First Aid Kit w/ Plastic Waterproof Case, ANSI 2009		
	1	Bloodborne Pathogen Kit / Body Fluid Kit		
	1	Decal - "Please Fasten Your Seat Belt"		
	1	Decal - "Vehicle Height Sticker"		
	1	Decal - "No Smoking"		
	1	Decal - "Watch your step" placed on step riser		
	1	<i>Decal - "In Emergency, Dial 911" Placed on driver modesty panel</i>		
	1	<i>Decal - "Emergency equipment" Ship loose</i>		
		GRAB RAIL / STANCHION / PANELS		
	1	Ceiling Grab Rail Curbside (ADA requirement)		
	1	Ceiling Grab Rail Streetside		
	1	Stanchion Behind Driver with Modesty Panel and 1/4" Plexiglass Panel		
	1	Modesty Stanchion in Front of Rear Lift		
	3	Gray Padded Modesty Panel (each)		
	1	<i>3-Padded Stanchion Poles-Vertical-Yellow</i>		
		MISC OPTIONS		
	1	Ford E-450 Spare Tire (Placed Loose in Back of Bus)		
	2	Document protectors Mounted on front bulkhead		
	1	<i>Tectl Undercoating</i>		
	1	<i>Set of Wheel Chocks</i>		
		EXTERIOR GRAPHICS		
	1	Decal - "This vehicle stops at all railroad crossings"		

	1	Decal - "This vehicle makes frequent stops"			
	1	Decal - "Caution: Loading and Unloading Passengers" 1.25" white lettering on red background			
		SEATING			
		DRIVER'S SEATING			
	1	Ford OEM Driver's Seat, Recovered to Match Passenger Seats, Manual Pedestal			
	1	Adnik Power Seat Base w/ Skirt - Required w/ USSC G2, Shield & Shield Sport Driver Seats			
		OEM DRIVER SEAT RE-COVERED TO MATCH PASSENGER SEATS FREEDMAN SHIELD & LO CAM DRIVER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	1	Driver Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	12	Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEATING			
		FREEDMAN FEATHERWEIGHT STANDARD RIGID SEATS			
	5	Featherweight Mid-High Double Seat			
		FREEDMAN FLIP AND FOLDAWAY SEATS			
	1	BV Foldaway Seat - Notch Back Double			
		ICS - CHILD RESTRAINT SEATS <u>**REQUIRES WEIGHT ANALYSIS**</u>			
	1	Double Seat, (2) Integrated Child Seats			
		SEAT OPTIONS			
	12	ABS Plastic Seat Backs Per Person (Mid-High and Notchback Folds Only)			
	12	AV Grab Handle, Black - Each (PPE Material)	on: All Seats		
	6	Flip-Up US Armrest, Black - Each (PPE Material)	on: Aisle Seats		
	1	ICS Seat instructions printed on seat in english and spanish			
		SEAT BELTS			
	12	Seat Belt, USR Freedman Retractable (Per Person) N/A Foldaway or Flip Seats			
	2	Seat Belt Extension, 12"			
		OTHER OPTIONAL EQUIPMENT & FEATURES			
	2	Parts book, operations manual, maintenance manual, wiring schematic			
	1	Certified Weight Slip			

PRODUCTION NOTES / INSTRUCTIONS	

TOTAL CONVERSION PRICE			
LESS MANUFACTURER DISCOUNT APPLIED			
NET CONVERSION PRICE			
TOTAL BUS PRICE (Includes Chassis)			
FREIGHT CHARGE (Minimum \$350.00)	Miles:		\$ 1.65
PLEASE NOTE: Actual delivery fees are subject to change at time of shipment, due to fuel prices			
GRAND TOTAL BUS PRICE			
DEPOSIT			
NET DUE			

AUTHORIZED CUSTOMER SIGNATURE

Delivery Date Requested:

Delivery Date Approved:

AUTHORIZED ENDERA AUTOMOTIVE SIGNATURE

DATE

4

3

2

1

288.25 EXTERIOR LENGTH

172.98 INTERIOR LENGTH

33.39

33.00 TYP

96.00 EXTERIOR WIDTH

92.49 INTERIOR WIDTH

WHEELCHAIR LOCATION

WHEELCHAIR LOCATION

ROOF
HATCH

PUMP

44.50
CLEAR OPENING

33.00
CLEAR OPENING

158.00 WHEEL BASE



NAME	DATE
DRAWN	9/21/2023
QUANTITY	
MATERIAL	
THICKNESS	
FINISH	
DO NOT SCALE DRAWING	

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/4$
ANGULAR MATCH ± 1
TWO PLACE DECIMAL ± 0.02
THREE PLACE DECIMAL ± 0.01

TITLE:	
SIZE B	DWG. NO. 24EFFWC36158 - 12+2 (J608)
SCALE: 1:20	WEIGHT:
SHEET 1 OF 2	

REV
A

CONTENTS

OBJECTIVE	1
RESPONSIBILITIES	1
PERFORM LEAK TEST	1
END OF PROCESS	2

OBJECTIVE

1. To define the process of performing leak test on completed vehicles.

RESPONSIBILITIES

2. Manufacturing management is responsible for assigning the properly qualified employees to perform leak testing.
3. The inspector is responsible for conducting the leak test and properly completing the inspection forms.
4. The Quality department is responsible for the oversight and management of the leak test process.

PERFORM LEAK TEST

5. Use the proper form for the vehicle being tested:
 - 5.1 F-QLT-0020 for 4 section school bus.
 - 5.2 F-QLT-0021 for 5 section school bus.
 - 5.3 F-QLT-0015 for 6 section school bus.
 - 5.4 F-QLT-0004 for 24' commercial bus.
 - 5.5 F-QLT-0005 for 28' commercial bus.
6. Enter the job #, VIN #, date, and name on the form.
7. Circle yes/no if the vehicle has a wheelchair lift.

8. Ensure all doors, windows, hatches etc. are closed.
9. Perform the leak test:
 - 9.1 Turn on the water valve.
 - 9.2 Verify that water is spraying.
 - 9.3 Back the bus into the spray booth.
 - 9.4 Using a light, inspect all interior areas for leaks.
 - 9.5 Identify any leaks on the inspection form by circling the area.
 - 9.6 If more than one leak is found, number the circles, starting with 1.
 - 9.7 Allow the system to spray for 30 minutes. Note that the inspector stays inside the bus for the duration of the test.
 - 9.8 Drive the bus out of the booth.
 - 9.9 Shut off the water valve.
 - 9.10 If no leaks are found, file the completed form with the job traveler.
 - 9.11 On the back of the form, check the appropriate box under "Test Results".
 - 9.12 Investigate the root cause of any leak(s) and repair as necessary.
 - 9.13 On the back of the form, enter the leak # and the corrective action taken by describing the repair.
10. Notify the line manager if assistance is needed to make the proper repairs.
11. After repairs are completed, perform another leak test as noted in item 9 above.
12. Repeat the process until no leaks are identified.
13. When the vehicle passes inspection, the inspector files the completed form with the traveler.
14. The inspector notifies the line manager that the bus has passed inspection.

END OF PROCESS

BID FORM #2

CERTIFICATION FOR AIR & WATER POLLUTION

The Vendor certifies that the vehicles proposed:

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

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

Date

Authorized Signature

Title

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #3

**DISADVANTAGED BUSINESS ENTERPRISE
VENDORS/ MANUFACTURERS CERTIFICATION**

(Check appropriate statement)

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

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

5/28/2024

Date

Don White

Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #4

**BUY AMERICA CERTIFICATION
ROLLING STOCK**

Certificate of Compliance

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

5/28/2024

Date



Authorized Signature

Endera (Manufacturer)

Company Name

Don White

Name

Bid Coordinator

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
<30' Length Cutaway Bus

BID FORM #5

**FEDERAL MOTOR VEHICLE
SAFETY STANDARDS CERTIFICATION**

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

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

Endera (Manufacturer) hereby certifies that it

 IS or

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

BID FORM #7

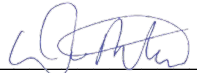
**CERTIFICATION OF PRIMARY PARTICIPANT REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third-party contract),
Endera (Manufacturer) _____ (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),
Endera (Manufacturer) _____, 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.



Bid Coordinator
Signature and Title of Authorized Official

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #8

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

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

Endera (Manufacturer)

Company Name

SPECIFICATION COMPLIANCE

NOTE: Please check if what is offered is in exact compliance with specifications. **Any discrepancies required 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.**

 X 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
<30' Length Cutaway Bus

BID FORM #9

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

5/28/2024

Date



Authorized Signature

Bid Coordinator

Title

4

3

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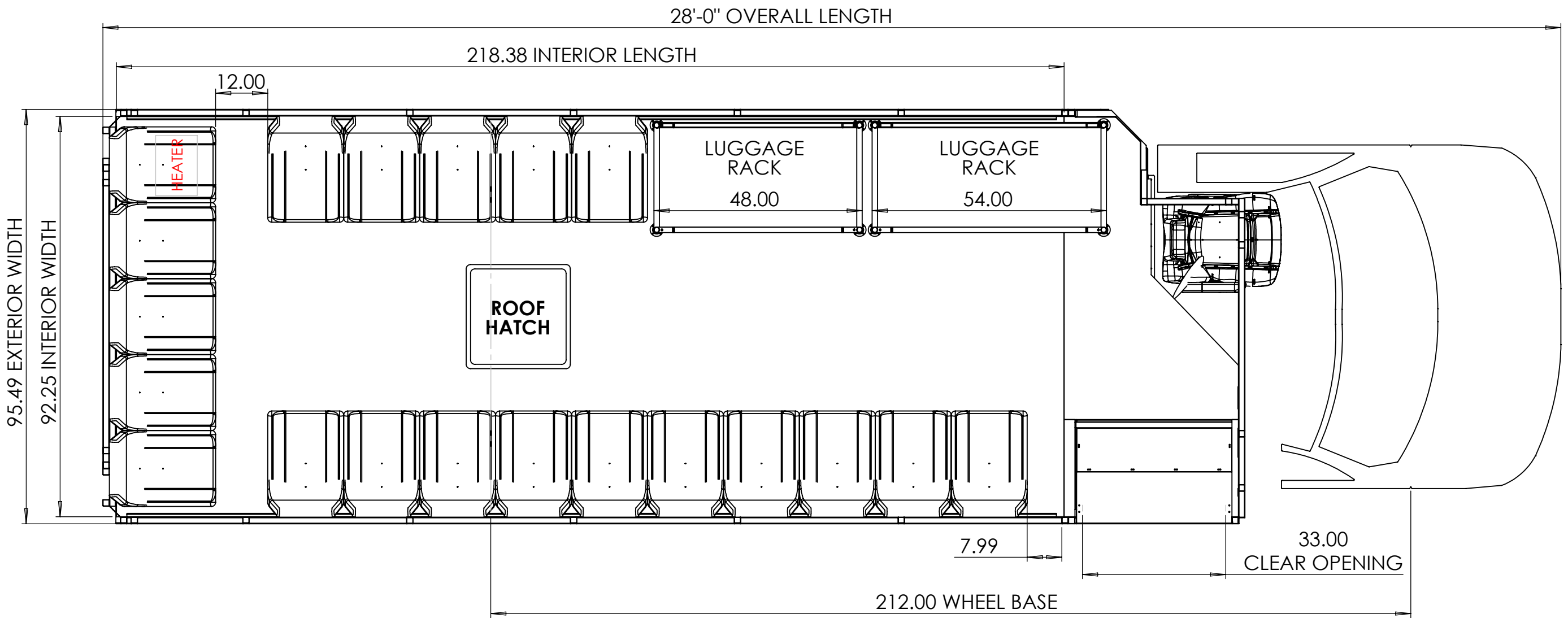
1

B

B

A

A



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/4$
ANGULAR MACH ± 1
TWO PLACE DECIMAL ± 0.03
THREE PLACE DECIMAL ± 0.01

	NAME	DATE
DRAWN		4/9/2024
QUANTITY		
	MATERIAL	
	THICKNESS	
	FINISH	
DO NOT SCALE DRAWING		



TITLE:		
SIZE	DWG. NO.	REV
B	28PSSH36 - 212 - 20 Pass Luggage Rack	A
SCALE: 1:100 WEIGHT:		SHEET 1 OF 2

							FUEL LOAD ADJ. DATA (F.L.A.)				
	VEHICLE DESCRIPTION		FRONT AXLE		REAR AXLE		FUEL CAP.	FUEL WGT PER GAL.			
	28PSSH36-212-20 Luggage Racks		3380	6100			55	6			
	WB	PER IN. VALUE CALC.	AXLE WEIGHTS				FUEL AMT.	WGT OF FUEL	FUEL ADJ. AMT.		
	212	0.47	LEFT FRONT	RIGHT FRONT			1.00	330	-330.00		
	AXLE CAPACITIES		2210	1974			FUEL TANK CENTER				
	FRONT	REAR	TOTAL	LEFT REAR	RIGHT REAR		202.63				
	5000	9600	14500	2635	2969						
	STREETSIDE					CURBSIDE					
DESC.	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DESC.
DRIVER	44	150	20.75%	118.87	31.13			0.00%	0.00	0.00	
			0.00%	0.00	0.00	97.19	176.25	45.84%	95.45	80.80	
Luggage 54"	97.1	150	45.80%	81.30	68.70	114.69	176.25	54.10%	80.90	95.35	
Luggage 48"	150.41	150	70.95%	43.58	106.42	132.19	176.25	62.35%	66.35	109.90	
			0.00%	0.00	0.00	149.69	176.25	70.61%	51.80	124.45	
FW Low	184.69	176.25	87.12%	22.70	153.55	167.19	176.25	78.86%	37.25	139.00	
FW Low	200.12	176.25	94.40%	9.88	166.37	184.69	176.25	87.12%	22.70	153.55	
FW Low	219.62	176.25	103.59%	-6.34	182.59	202.19	176.25	95.37%	8.16	168.09	
FW Low	237.12	176.25	111.85%	-20.88	197.13	219.69	176.25	103.63%	-6.39	182.64	
FW Low	254.62	176.25	120.10%	-35.43	211.68	237.19	176.25	111.88%	-20.94	197.19	
			0.00%	0.00	0.00	254.69	176.25	120.14%	-35.49	211.74	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
2 FW Low	287.54	352	135.63%	-125.42	477.42	287.54	352	135.63%	-125.42	477.42	
1/2 Seat FW Low	287.54	88.125	135.63%	-31.40	119.53	287.54	88.125	135.63%	-31.40	119.53	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
TOTAL PASSENGER LOAD				56.85	1714.53				142.97	2059.66	3974.00
	AXLE WEIGHTS			2210.00	2635.00				1974.00	2969.00	9788.00
	No Lift, Valeo 70k Rooftop Condesner;										
				FRONT	REAR	LEFT/RIGHT TOTALS	LEFT/RIGHT %'S				
			LEFT	2266.85	4349.53	6616.38	0.481		ICE 28' 212"WB		
			RIGHT	2116.97	5028.66	7145.63	0.519				
			FRT / REAR TOTALS	4383.81	9378.19	13762.00			ESTIMATION		
			AXLE CAPACITIES	5000	9600	14500					
			AVAILABLE CAPACITIES	616.19	221.81	738.00					



ENDERA ORDER FORM

+1 419.523.3593
804 N. Pratt St.
Ottawa, OH 45875

Date:

Sales: 303-880-2788
reid@enderacorp.com
Warranty / Parts: 419-523-3593

CUSTOMER INFORMATION

SHIPPING / PAYMENT INFORMATION

Customer Pick Up: ☐ Ship Best Way to Location Below: ☐

Customer:
Address:
City, St. Zip:
Contact:
Phone:
Fax:
P.O. #:

Ship To:
Address:
City, St. Zip:
Contact:
Phone:
Payment:

Additional
Shipping
Instructions

ARE FTA FUNDS USED?		FTA INFO REQUIRED
YES or NO	<input type="text"/>	

Is this for a contract?	YES or NO	Model Number:	Number of units in this order:
	<input type="text"/>	Description: 20 Perimeter	
	<i>If YES please complete the fields to the right</i>	Seating Capacity:	
			3

End User Information

Name:
Address:
City, St. Zip:

Applicable FIN / FAN Code:

Pricing and specs subject to change without notice - COD or approved financing only - FOB Ottawa, OH

CHASSIS PRICING

QTY	CHASSIS PRICE ADDED	Price	Extended
	Ford E450, 176" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Ford E450, 158" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Chassis Transfer Fee	Transferring Chassis To What Dealer	
	Less: Applicable Government Bid Assistance		
	Less: Applicable Fleet Allowance		
	Less: Applicable Commercial Retail Allowance		
	Less: Commercial Upfit Allowance		
	Less: Mobility Allowance		
	Less: PNI Allowance		
	Total Net Chassis (Plus any special options noted below):		
	Grand Total Net Chassis Price:		

BASE CONVERSION				
QTY			Price	Extended
Endera - FORD E450 - Standard Floor				
	1	28' E450, 212" WB, 14,500 GVWR		
BODY / CONVERSION OPTIONS				
Option #	QTY	Option Description	Price	Extension
		MISCELLANEOUS PARATRANSIT ACCESSORIES		
	1	Hazard Lights to flash when wheelchair door is opened		
		FLOORING		
	1	Gerflor Tarabus Sirius CONFIRM COLOR AT ORDER, 2.5 mm Thick		
	1	Yellow Step Nosing (order grit style)		
	1	Standee Line Behind Driver at Entrance Stanchion w/ Decal		
	1	Heated Entry Step-Well		
	1	Aluminum subfloor		
	1	3/4" Marine Grade Plywood		
		ELECTRICAL		
	1	Red Indicator Lights above each Emergency Exit (Total of 4)		
	1	Back Up Alarm		
	1	Pull Cord Passenger Stop Indicator with Touch Tape		
	1	Stop Request Sign in Driver's Area		
	1	Two Way Radio prep Package (no hot wire, pull cord, ground, and conduit only)		
	1	Skirt Mounted Battery Box with Slide Out Battery Tray - Stainless		
	1	Hour Meter		
	1	Digital Clock installed above front bulkhead door (visible to passengers)(8"X3" min)		
		EXTERIOR LIGHTS		
	1	Midship Turning Lights		
	1	Fog Lamps		
	1	Strobe light roof mounted		
	1	Additional Exterior WC Door Light		
		AUDIO / VISUAL		
	1	Radio AM/FM/USB/BT-OEM Ford		
	1	Rosco Backup Camera with 7" Monitor		
	1	PA - 40 Watt Panel Mount System wired to speaker, Gooseneck Microphone, External Speaker		
	1	Intermotive Fast Idle (AFIS), No Interlock		
	1	AngelTrax Vulcan V12 HDIP Mobile DVR 6 Camera System with 1TB hardrive		
	1	Lockable box to mount DVR System		
	1	2 additional speakers (6 total for pax compartment)		
		DOORS / WINDOWS		
	1	Transign Front Destination Sign		
	1	Transign Side Destination Sign		
	1	Vented Windows with Flush Side Slider (All windows)		
	1	Hold Open Latch for bulkhead storage compartment		
		CHASSIS / EXTERIOR		
	1	Heavy Duty 12" Driver's Step		
	1	Front Mud Flaps		
	1	MorRyde RS Rear Suspension		
	1	Exterior Mirrors, Rosco Remote Power - Heated, RH & LH, Black Arms (Exchange)		
	1	Locking Fuel Fill Door		
	1	Valve Stem Extender Inner Dual Rear Wheel, pair		
	1	Alignment Certification Post-Production		
	1	Intermotive EMS System (engine monitoring and shutdown system)		

	1	2" Rubber Rub Rail installed at floor level		
		SIDEWALL / CEILING / HATCH		
	1	Roof Hatch - Transpec 1075 Series Dual Purpose Safety Vent II to Match Ceiling		
		INTERIOR		
	1	Interior Flat Mirror 6" x 16"		
	1	Farebox pre-wire to modesty panel behind driver		
	1	Fresnal Lens on flat mirror		
		LUGGAGE RACKS / STORAGE		
	1	54" Interior Luggage Rack, 2 Shelves w/ Carpet		
	1	60" Interior Luggage Rack, 2 Shelves w/ Carpet		
		CLIMATE CONTROL		
		VALEO CLIMATE CONTROL A/C SYSTEMS		
		Valeo DUAL COMPRESSOR SYSTEMS - SKIRT CONDENSER		
	1	90K BTU Total - Valeo-R476021 - Dual Compressors, Skirt Cond., Ceiling Evap.		
		CABIN HEATERS		
	2	Valeo Rear Heater-65K BTU, 3 Speed - <i>Only Available with Perimeter Seating</i>		
		MISCELLANEOUS - HEATER & A/C ACCESSORIES & FANS		
	1	Heater Booster Pump, Includes Electric Water Valve in lieu of Manual Valves		
	1	Defroster Fan - Mounted in Driver's Area		
		SAFETY OPTIONS		
	1	5 Lb. ABC Fire Extinguisher w/ Bracket		
	1	Bi-Directional Reflective Triangles		
	1	25 Unit First Aid Kit w/ Plastic Waterproof Case, ANSI 2009		
	1	Bloodborne Pathogen Kit / Body Fluid Kit		
	1	Decal - "Please Fasten Your Seat Belt"		
	1	Decal - "Vehicle Height Sticker"		
	1	Decal - "No Smoking"		
	1	Decal - "Watch your step" placed on step riser		
	1	Decal - "In Emergency, Dial 911" Placed on driver modesty panel		
	1	Decal - "Emergency equipment" Ship loose		
		GRAB RAIL / STANCHION / PANELS		
	1	Ceiling Grab Rail Curbside (ADA requirement)		
	1	Ceiling Grab Rail Streetside		
	1	Stanchion Behind Driver with Modesty Panel and 1/4" Plexiglass Panel		
	3	Gray Padded Modesty Panel (each)		
	1	3-Padded Stanchion Poles-Vertical-Yellow		
		MISC OPTIONS		
	1	Ford E-450 Spare Tire (Placed Loose in Back of Bus)		
	2	Document protectors Mounted on front bulkhead		
	1	Tectil Undercoating		
	1	Set of Wheel Chocks		
		EXTERIOR GRAPHICS		
	1	Decal - "This vehicle stops at all railroad crossings"		
	1	Decal - "This vehicle makes frequent stops"		
	1	Decal - "Caution: Loading and Unloading Passengers" 1.25" white lettering on red background		
		SEATING		
		DRIVER'S SEATING		
	1	Ford OEM Driver's Seat, Recovered to Match Passenger Seats, Manual Pedestal		
	1	Adnik Power Seat Base w/ Skirt - Required w/ USSC G2, Shield & Shield Sport Driver Seats		
		OEM DRIVER SEAT RE-COVERED TO MATCH PASSENGER SEATS		
		FREEDMAN SHIELD & LO CAM DRIVER SEAT FABRICS		
		EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER		

	1	Driver Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	20	Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEATING			
		FREEDMAN FEATHERWEIGHT STANDARD RIGID SEATS			
	8	Featherweight Low Back Double Seat			
	2	Featherweight Low Back Single Seat			
		ICS - CHILD RESTRAINT SEATS <u>**REQUIRES WEIGHT ANALYSIS**</u>			
	1	Double Seat, (2) Integrated Child Seats			
		SEAT OPTIONS			
	1	ICS Seat instructions printed on seat in english and spanish			
		SEAT BELTS			
	20	Seat Belt, USR Freedman Retractable (Per Person) N/A Foldaway or Flip Seats			
	2	Seat Belt Extension, 12"			

OTHER OPTIONAL EQUIPMENT & FEATURES					
	2	Parts book, operations manual, maintenance manual, wiring schematic	\$ -	\$ -	
	1	Certified Weight Slip	\$ -	\$ -	

PRODUCTION NOTES / INSTRUCTIONS					

TOTAL CONVERSION PRICE				
LESS MANUFACTURER DISCOUNT APPLIED				
NET CONVERSION PRICE				
TOTAL BUS PRICE (Includes Chassis)				
FREIGHT CHARGE (Minimum \$350.00)		Miles:		
PLEASE NOTE: Actual delivery fees are subject to change at time of shipment, due to fuel prices			\$	1.65
GRAND TOTAL BUS PRICE				
DEPOSIT				
NET DUE				

PLEASE SUBMIT FLOORPLAN WITH ORDER

_____ AUTHORIZED CUSTOMER SIGNATURE		Delivery Date Requested:	_____
_____ AUTHORIZED ENDERA AUTOMOTIVE SIGNATURE		Delivery Date Approved:	_____
			_____ DATE



ENDERA ORDER FORM

+1 419.523.3593
804 N. Pratt St.
Ottawa, OH 45875

Date:

Sales: 303-880-2788
reid@enderacorp.com
Warranty / Parts: 419-523-3593

CUSTOMER INFORMATION

SHIPPING / PAYMENT INFORMATION

Customer Pick Up: ☐ Ship Best Way to Location Below: ☐

Customer:
Address:
City, St. Zip:
Contact:
Phone:
Fax:
P.O. #:

Ship To:
Address:
City, St. Zip:
Contact:
Phone:
Payment:

Additional
Shipping
Instructions

ARE FTA FUNDS USED?		FTA INFO REQUIRED
YES or NO	<input type="text"/>	

Is this for a contract?	YES or NO	Model Number:	Number of units in this order:
	<input type="text"/>	Description:	
	<input type="text"/>	Seating Capacity:	
If YES please complete the fields to the right		16+2	5

End User Information

Name:
Address:
City, St. Zip:

Applicable FIN / FAN Code:

Pricing and specs subject to change without notice - COD or approved financing only - FOB Ottawa, OH

CHASSIS PRICING

QTY	CHASSIS PRICE ADDED	Price	Extended
	Ford E450, 176" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Ford E450, 158" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Chassis Transfer Fee		
	Transferring Chassis To What Dealer		
	Less: Applicable Government Bid Assistance		
	Less: Applicable Fleet Allowance		
	Less: Applicable Commercial Retail Allowance		
	Less: Commercial Upfit Allowance		
1	Less: Mobility Allowance		
	Less: PNI Allowance		
	Total Net Chassis (Plus any special options noted below):		
	Grand Total Net Chassis Price:		

BASE CONVERSION				
QTY			Price	Extended
Endera - FORD E450 - Standard Floor				
	1	25' E450, 176" WB, 14,500 GVWR		
BODY / CONVERSION OPTIONS				
Option #	QTY	Option Description	Price	Extension
PARATRANSIT OPTIONS				
	1	Rear Lift - ADA with Double Wheel Chair Doors, Windows, Shift Interlock & Lights		
BRAUN WHEELCHAIR LIFTS				
	1	Braun Century - NCL3454-2 Lift, 34"x54", 1000# with Front Pump & Safety Belt		
Q-STRAINT W.C. SECUREMENT KITS				
	2	Q-8100-A1T-L - QRT DELUXE Retractable Shoulder / Lap Belt Combo - L Track		
	2	Order with Scooter Kit		
	2	Retractable hieght adjusters		
MISCELLANEOUS PARATRANSIT ACCESSORIES				
	1	Q-Straint Belt Cutter (Ship Loose)		
	8	Q-Straint 14" Quick Strap/Webbing Loop		
	1	Hazard Lights to flash when wheelchair door is opened		
FLOORING				
	1	Gerflor Tarabus Sirius CONFIRM COLOR AT ORDER, 2.5 mm Thick		
	1	Yellow Step Nosing (order grit style)		
	1	Standee Line Behind Driver at Entrance Stanchion w/ Decal		
	1	Heated Entry Step-Well		
	1	Aluminum subfloor		
	1	3/4" Marine Grade Plywood		
ELECTRICAL				
	1	Red Indicator Lights above each Emergency Exit (Total of 4)		
	1	Back Up Alarm		
	1	Pull Cord Passenger Stop Indicator with Touch Tape		
	1	Stop Request Sign in Driver's Area		
	1	Two Way Radio prep Package (no hot wire, pull cord, ground, and conduit only)		
	1	Skirt Mounted Battery Box with Slide Out Battery Tray - Stainless		
	1	Hour Meter		
	1	Digital Clock installed above front bulkhead door (visible to passengers)(8"X3" min)		
EXTERIOR LIGHTS				
	1	Midship Turning Lights		
	1	Fog Lamps		
	1	Strobe light roof mounted		
	1	Additional Exterior WC Door Light		
AUDIO / VISUAL				
	1	Radio AM/FM/USB/BT-OEM Ford		
	1	Rosco Backup Camera with 7" Monitor		
	1	PA - 40 Watt Panel Mount System wired to speaker, Gooseneck Microphone, External Speaker		
	1	Intermotive Fast Idle (AFIS), No Interlock		
	1	AngelTrax Vulcan V12 HDIP Mobile DVR 6 Camera System with 1TB hardrive		
	1	Lockable box to mount DVR System		
	1	2 additional speakers (6 total for pax compartment)		
DOORS / WINDOWS				
	1	Rear Door (32"x54") - With Window		
	1	Transign Front Destination Sign		
	1	Transign Side Destination Sign		

	1	Vented Windows with Flush Side Slider (All windows)		
	1	<i>Hold Open Latch for bulkhead storage compartment</i>		
		CHASSIS / EXTERIOR		
	1	Heavy Duty 12" Driver's Step		
	1	Front Mud Flaps		
	1	MorRyde RS Rear Suspension		
	1	Exterior Mirrors, Rosco Remote Power - Heated, RH & LH, Black Arms (Exchange)		
	1	Locking Fuel Fill Door		
	1	Valve Stem Extender Inner Dual Rear Wheel, pair		
	1	Alignment Certification Post-Production		
	1	<i>Intermotive EMS System (engine monitoring and shutdown system)</i>		
	1	<i>2" Rubber Rub Rail installed at floor level</i>		
		SIDEWALL / CEILING / HATCH		
	1	Roof Hatch - Transpec 1075 Series Dual Purpose Safety Vent II to Match Ceiling		
		INTERIOR		
	1	Interior Flat Mirror 6" x 16"		
	1	Farebox pre-wire to modesty panel behind driver		
	1	<i>Fresnal Lens on flat mirror</i>		
		CLIMATE CONTROL		
		VALEO CLIMATE CONTROL A/C SYSTEMS		
		Valeo DUAL COMPRESSOR SYSTEMS - SKIRT CONDENSER		
	1	90K BTU Total - Valeo-R476021 - Dual Compressors, Skirt Cond., Ceiling Evap.		
		CABIN HEATERS		
	2	Valeo 70K BTU, 3 Speed-Mounted Under Seat With Shut Off Valves		
		MISCELLANEOUS - HEATER & A/C ACCESSORIES & FANS		
	1	Heater Booster Pump, Includes Electric Water Valve in lieu of Manual Valves		
	1	Defroster Fan - Mounted in Driver's Area		
		SAFETY OPTIONS		
	1	5 Lb. ABC Fire Extinguisher w/ Bracket		
	1	Bi-Directional Reflective Triangles		
	1	25 Unit First Aid Kit w/ Plastic Waterproof Case, ANSI 2009		
	1	Bloodborne Pathogen Kit / Body Fluid Kit		
	1	Decal - "Please Fasten Your Seat Belt"		
	1	Decal - "Vehicle Height Sticker"		
	1	Decal - "No Smoking"		
	1	Decal - "Watch your step" placed on step riser		
	1	<i>Decal - "In Emergency, Dial 911" Placed on driver modesty panel</i>		
	1	<i>Decal - "Emergency equipment" Ship loose</i>		
		GRAB RAIL / STANCHION / PANELS		
	1	Ceiling Grab Rail Curbside (ADA requirement)		
	1	Ceiling Grab Rail Streetside		
	1	Stanchion Behind Driver with Modesty Panel and 1/4" Plexiglass Panel		
	1	Modesty Stanchion in Front of Rear Lift		
	3	Gray Padded Modesty Panel (each)		
	1	<i>3-Padded Stanchion Poles-Vertical-Yellow</i>		
		MISC OPTIONS		
	1	Ford E-450 Spare Tire (Placed Loose in Back of Bus)		
	2	Document protectors Mounted on front bulkhead		
	1	<i>Tectl Undercoating</i>		
	1	<i>Set of Wheel Chocks</i>		
		EXTERIOR GRAPHICS		
	1	Decal - "This vehicle stops at all railroad crossings"		

	1	Decal - "This vehicle makes frequent stops"			
	1	Decal - "Caution: Loading and Unloading Passengers" 1.25" white lettering on red background			
		SEATING			
		DRIVER'S SEATING			
	1	Ford OEM Driver's Seat, Recovered to Match Passenger Seats, Manual Pedestal			
	1	Adnik Power Seat Base w/ Skirt - Required w/ USSC G2, Shield & Shield Sport Driver Seats			
		OEM DRIVER SEAT RE-COVERED TO MATCH PASSENGER SEATS FREEDMAN SHIELD & LO CAM DRIVER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	1	Driver Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	16	Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEATING			
		FREEDMAN FEATHERWEIGHT STANDARD RIGID SEATS			
	7	Featherweight Mid-High Double Seat			
		FREEDMAN FLIP AND FOLDAWAY SEATS			
	1	BV Foldaway Seat - Notch Back Double			
		ICS - CHILD RESTRAINT SEATS <u>**REQUIRES WEIGHT ANALYSIS**</u>			
	1	Double Seat, (2) Integrated Child Seats			
		SEAT OPTIONS			
	16	ABS Plastic Seat Backs Per Person (Mid-High and Notchback Folds Only)			
	16	AV Grab Handle, Black - Each (PPE Material)	on: All Seats		
	8	Flip-Up US Armrest, Black - Each (PPE Material)	on: Aisle Seats		
	1	ICS Seat instructions printed on seat in english and spanish			
		SEAT BELTS			
	16	Seat Belt, USR Freedman Retractable (Per Person) N/A Foldaway or Flip Seats			
	2	Seat Belt Extension, 12"			

		OTHER OPTIONAL EQUIPMENT & FEATURES			
	2	Parts book, operations manual, maintenance manual, wiring schematic	\$ -	\$ -	
	1	Certified Weight Slip	\$ -	\$ -	

PRODUCTION NOTES / INSTRUCTIONS					

TOTAL CONVERSION PRICE			
LESS MANUFACTURER DISCOUNT APPLIED			
NET CONVERSION PRICE			
TOTAL BUS PRICE (Includes Chassis)			
FREIGHT CHARGE (Minimum \$350.00)	Miles:		
PLEASE NOTE: Actual delivery fees are subject to change at time of shipment, due to fuel prices		\$	1.65
GRAND TOTAL BUS PRICE			
DEPOSIT			
NET DUE			

PLEASE SUBMIT FLOORPLAN WITH ORDER

AUTHORIZED CUSTOMER SIGNATURE

Delivery Date Requested:

Delivery Date Approved:

AUTHORIZED ENDERA AUTOMOTIVE SIGNATURE

DATE

4

3

2

1

25.00' OVERALL LENGTH (BUMPER TO BUMPER)

183.75 INTERIOR LENGTH

34.00

31.00 TYP

9.00

95.49 EXTERIOR WIDTH

92.00 INTERIOR WIDTH

WHEELCHAIR LOCATION

WHEELCHAIR LOCATION

PUMP

ROOF
HATCH

30.50 TYP

9.00

33"
CLEAR OPENING

176.00 WHEEL BASE



NAME	DATE
DRAWN	9/21/2023
QUANTITY	

TITLE:

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/4$
ANGULAR MATCH ± 1
TWO PLACE DECIMAL ± 0.02
THREE PLACE DECIMAL ± 0.01

MATERIAL

THICKNESS

FINISH

DO NOT SCALE DRAWING

SIZE
BDWG. NO.
25EFFWC36176 - 16+2
2Dbl FoldREV
A

SCALE: 1:22

WEIGHT:

SHEET 1 OF 2

4

3

2

1

[illegible]



ENDERA ORDER FORM

+1 419.523.3593
804 N. Pratt St.
Ottawa, OH 45875

Date:

Sales: 303-880-2788
reid@enderacorp.com
Warranty / Parts: 419-523-3593

CUSTOMER INFORMATION

SHIPPING / PAYMENT INFORMATION

Customer Pick Up: ☐ Ship Best Way to Location Below: ☐

Customer:
Address:
City, St. Zip:
Contact:
Phone:
Fax:
P.O. #:

Ship To:
Address:
City, St. Zip:
Contact:
Phone:
Payment:

Additional
Shipping
Instructions

ARE FTA FUNDS USED?		FTA INFO REQUIRED
YES or NO	<input type="text"/>	

Is this for a contract?	YES or NO	Model Number:	Number of units in this order:
	<input type="text"/>	Description: 25 Passenger	
		Seating Capacity:	
If YES please complete the fields to the right			5

End User Information

Name:
Address:
City, St. Zip:

Applicable FIN / FAN Code:

Pricing and specs subject to change without notice - COD or approved financing only - FOB Ottawa, OH

CHASSIS PRICING

QTY	CHASSIS PRICE ADDED	Price	Extended
	Ford E450, 176" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Ford E450, 158" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Chassis Transfer Fee		
	Transferring Chassis To What Dealer		
	Less: Applicable Government Bid Assistance		
	Less: Applicable Fleet Allowance		
	Less: Applicable Commercial Retail Allowance		
	Less: Commercial Upfit Allowance		
	Less: Mobility Allowance		
	Less: PNI Allowance		
	Total Net Chassis (Plus any special options noted below):		
	Grand Total Net Chassis Price:		

BASE CONVERSION				
QTY			Price	Extended
	1	Endera - FORD E450 - Raised Floor 28', E450, 212" WB, 14,500 GVWR		
BODY / CONVERSION OPTIONS				
Option #	QTY	Option Description	Price	Extension
		MISCELLANEOUS PARATRANSIT ACCESSORIES		
	1	Hazard Lights to flash when wheelchair door is opened		
		FLOORING		
	1	Gerflor Tarabus Sirius CONFIRM COLOR AT ORDER, 2.5 mm Thick		
	1	Yellow Step Nosing (order grit style)		
	1	Standee Line Behind Driver at Entrance Stanchion w/ Decal		
	1	Heated Entry Step-Well		
	1	Aluminum subfloor		
	1	3/4" Marine Grade Plywood		
		ELECTRICAL		
	1	Red Indicator Lights above each Emergency Exit (Total of 4)		
	1	Back Up Alarm		
	1	Pull Cord Passenger Stop Indicator with Touch Tape		
	1	Stop Request Sign in Driver's Area		
	1	Two Way Radio prep Package (no hot wire, pull cord, ground, and conduit only)		
	1	Skirt Mounted Battery Box with Slide Out Battery Tray - Stainless		
	1	Hour Meter		
	1	Digital Clock installed above front bulkhead door (visible to passengers)(8"X3" min)		
		EXTERIOR LIGHTS		
	1	Midship Turning Lights		
	1	Fog Lamps		
	1	Strobe light roof mounted		
		AUDIO / VISUAL		
	1	Radio AM/FM/USB/BT-OEM Ford		
	1	Rosco Backup Camera with 7" Monitor		
	1	PA - 40 Watt Panel Mount System wired to speaker, Gooseneck Microphone, External Speaker		
	1	Intermotive Fast Idle (AFIS), No Interlock		
	1	AngelTrax Vulcan V12 HDIP Mobile DVR 6 Camera System with 1TB hardrive		
	1	Lockable box to mount DVR System		
	1	2 additional speakers (6 total for pax compartment)		
		DOORS / WINDOWS		
	1	Transign Front Destination Sign		
	1	Transign Side Destination Sign		
	1	Vented Windows with Flush Side Slider (All windows)		
	1	Hold Open Latch for bulkhead storage compartment		
		CHASSIS / EXTERIOR		
	1	Heavy Duty 12" Driver's Step		
	1	Front Mud Flaps		
	1	MorRyde RS Rear Suspension		
	1	Exterior Mirrors, Rosco Remote Power - Heated, RH & LH, Black Arms (Exchange)		
	1	Locking Fuel Fill Door		
	1	Valve Stem Extender Inner Dual Rear Wheel, pair		
	1	Alignment Certification Post-Production		
	1	Intermotive EMS System (engine monitoring and shutdown system)		
	1	2" Rubber Rub Rail installed at floor level		

		SIDEWALL / CEILING / HATCH		
	1	Roof Hatch - Transpec 1075 Series Dual Purpose Safety Vent II to Match Ceiling		
		INTERIOR		
	1	Interior Flat Mirror 6" x 16"		
	1	Farebox pre-wire to modesty panel behind driver		
	1	<i>Fresnal Lens on flat mirror</i>		
		LUGGAGE RACKS / STORAGE		
	1	Rear Luggage Area w/ Black Carpeted Partition, with 2 Lights		
		CLIMATE CONTROL		
		VALEO CLIMATE CONTROL A/C SYSTEMS		
		Valeo DUAL COMPRESSOR SYSTEMS - SKIRT CONDENSER		
	1	90K BTU Total - Valeo-R476021 - Dual Compressors, Skirt Cond., Ceiling Evap.		
		CABIN HEATERS		
	2	Valeo Upright Heater - 60K BTU with Shut Off Valves		
		MISCELLANEOUS - HEATER & A/C ACCESSORIES & FANS		
	1	Heater Booster Pump, Includes Electric Water Valve in lieu of Manual Valves		
	1	Defroster Fan - Mounted in Driver's Area		
		SAFETY OPTIONS		
	1	5 Lb. ABC Fire Extinguisher w/ Bracket		
	1	Bi-Directional Reflective Triangles		
	1	25 Unit First Aid Kit w/ Plastic Waterproof Case, ANSI 2009		
	1	Bloodborne Pathogen Kit / Body Fluid Kit		
	1	Decal - "Please Fasten Your Seat Belt"		
	1	Decal - "Vehicle Height Sticker"		
	1	Decal - "No Smoking"		
	1	Decal - "Watch your step" placed on step riser		
	1	<i>Decal - "In Emergency, Dial 911" Placed on driver modesty panel</i>		
	1	<i>Decal - "Emergency equipment" Ship loose</i>		
		GRAB RAIL / STANCHION / PANELS		
	1	Ceiling Grab Rail Curbside (ADA requirement)		
	1	Ceiling Grab Rail Streetside		
	1	Stanchion Behind Driver with Modesty Panel and 1/4" Plexiglass Panel		
	3	Gray Padded Modesty Panel (each)		
	1	<i>3-Padded Stanchion Poles-Vertical-Yellow</i>		
		MISC OPTIONS		
	1	Ford E-450 Spare Tire (Placed Loose in Back of Bus)		
	2	Document protectors Mounted on front bulkhead		
	1	<i>Tect/I Undercoating</i>		
	1	<i>Set of Wheel Chocks</i>		
		EXTERIOR GRAPHICS		
	1	Decal - "This vehicle stops at all railroad crossings"		
	1	<i>Decal - "This vehicle makes frequent stops"</i>		
	1	<i>Decal - "Caution: Loading and Unloading Passengers" 1.25" white lettering on red background</i>		
		SEATING		
		DRIVER'S SEATING		
	1	Ford OEM Driver's Seat, Recovered to Match Passenger Seats, Manual Pedestal		
	1	Adnik Power Seat Base w/ Skirt - Required w/ USSC G2, Shield & Shield Sport Driver Seats		
		OEM DRIVER SEAT RE-COVERED TO MATCH PASSENGER SEATS		
		FREEDMAN SHIELD & LO CAM DRIVER SEAT FABRICS		
		EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER		
	1	Driver Seat Cover - Level 4	Oxen Grey STD If none selected	
		PASSENGER SEAT FABRICS		

		EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER			
	24	Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEATING			
		FREEDMAN FEATHERWEIGHT STANDARD RIGID SEATS			
	11	Featherweight Mid-High Double Seat			
	1	Featherweight Mid-High Single Seat			
		ICS - CHILD RESTRAINT SEATS <u>**REQUIRES WEIGHT ANALYSIS**</u>			
	1	Double Seat, (2) Integrated Child Seats			
		SEAT OPTIONS			
	1	ICS Seat instructions printed on seat in english and spanish			
		SEAT BELTS			
	24	Seat Belt, USR Freedman Retractable (Per Person) N/A Foldaway or Flip Seats			
	2	Seat Belt Extension, 12"			

		OTHER OPTIONAL EQUIPMENT & FEATURES			
	2	Parts book, operations manual, maintenance manual, wiring schematic			
	1	Certified Weight Slip			

PRODUCTION NOTES / INSTRUCTIONS					

TOTAL CONVERSION PRICE				
LESS MANUFACTURER DISCOUNT APPLIED				
NET CONVERSION PRICE				
TOTAL BUS PRICE (Includes Chassis)				
FREIGHT CHARGE (Minimum \$350.00)		Miles:		
PLEASE NOTE: Actual delivery fees are subject to change at time of shipment, due to fuel prices			\$	1.65
GRAND TOTAL BUS PRICE				
DEPOSIT				
NET DUE				

PLEASE SUBMIT FLOORPLAN WITH ORDER

_____ AUTHORIZED CUSTOMER SIGNATURE		Delivery Date Requested:	_____
_____ AUTHORIZED ENDERA AUTOMOTIVE SIGNATURE		Delivery Date Approved:	_____
			_____ DATE

4

3

2

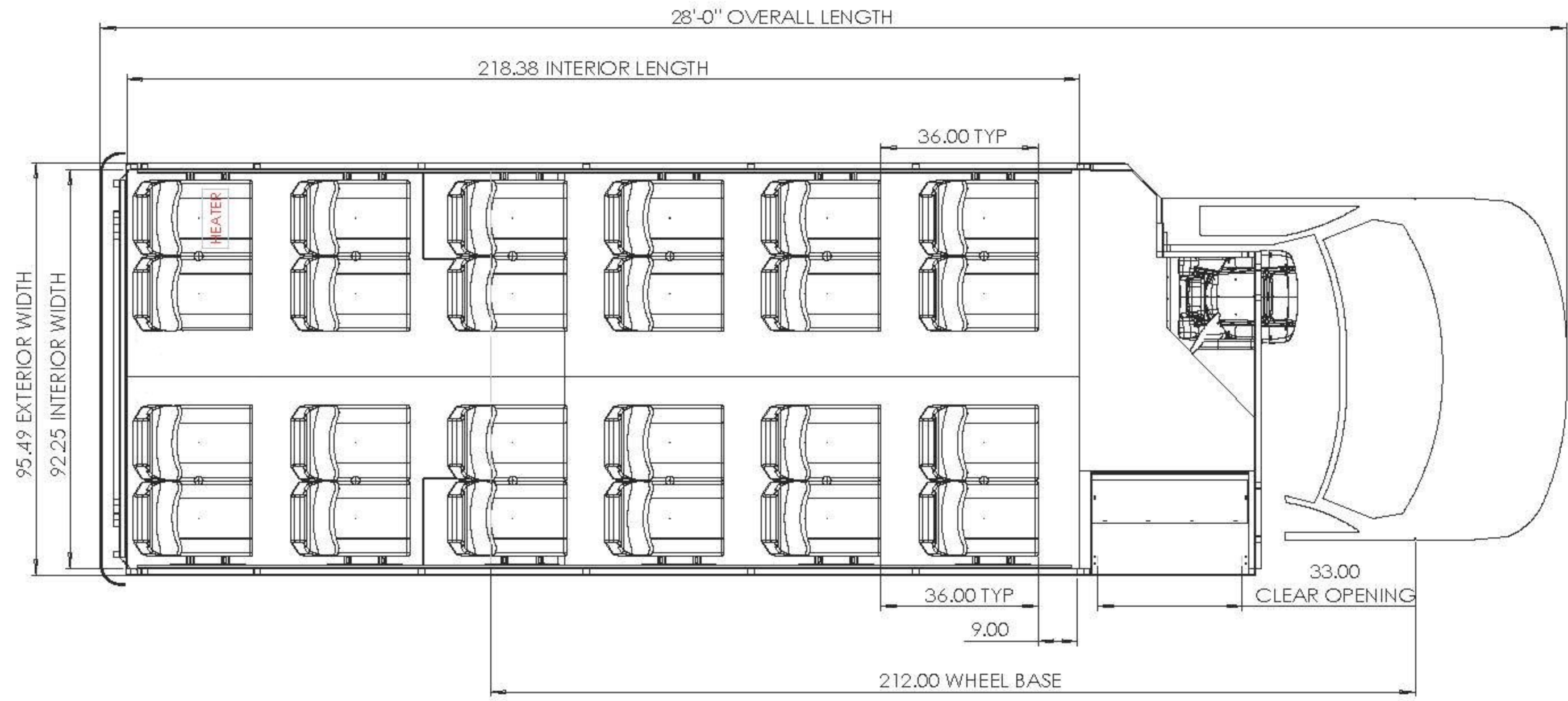
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B

B

A

A

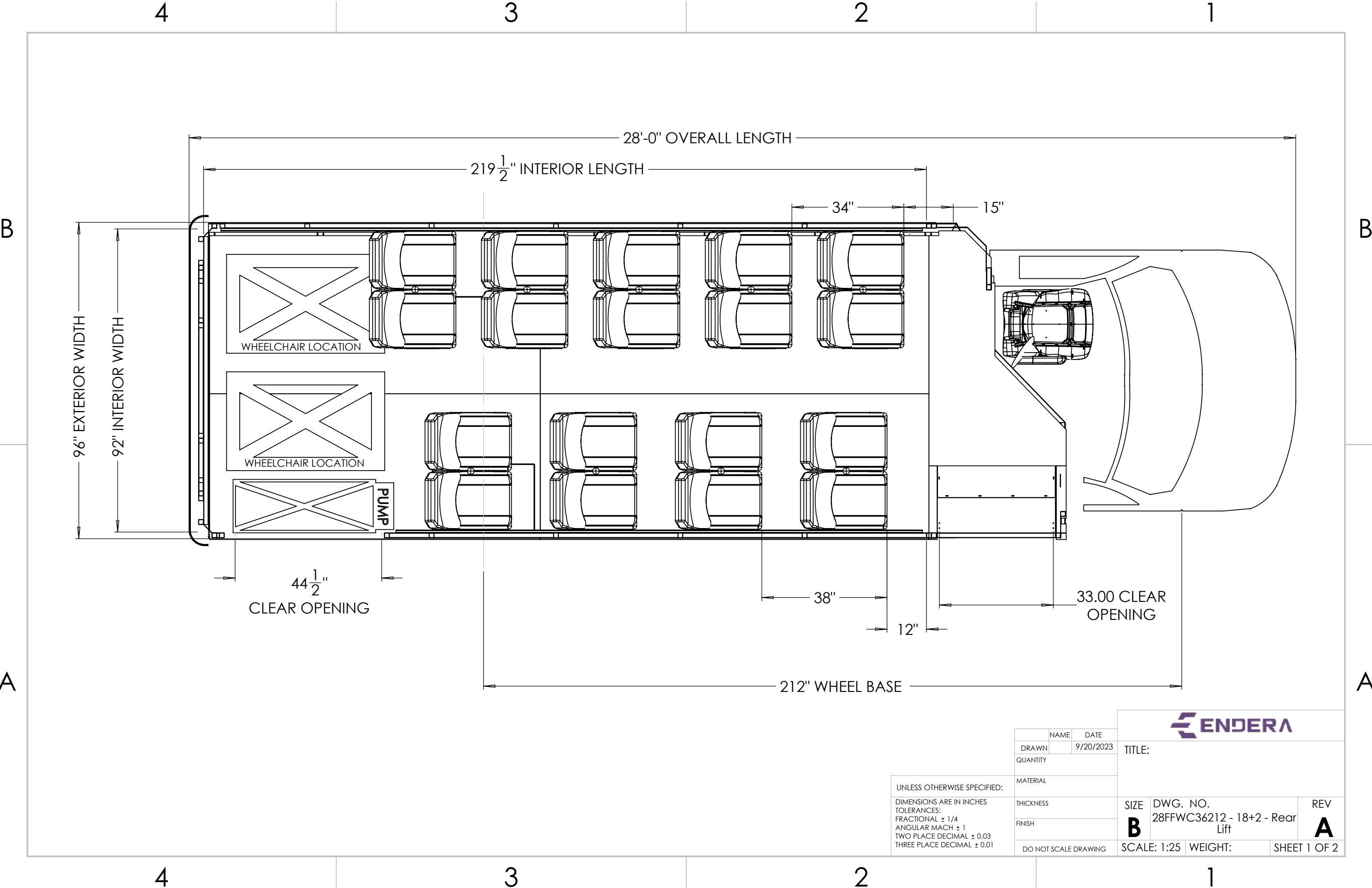


UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/4$
ANGULAR $MACH \pm 1$
TWO PLACE DECIMAL ± 0.02
THREE PLACE DECIMAL ± 0.01

NAME	DATE
DRAWN	4/9/2024
QUANTITY	
MATERIAL	
THICKNESS	
FINISH	
DO NOT SCALE DRAWING	

TITLE:			
SIZE	DWG. NO.	REV	
B	28FF36 - 212 PASSENGER	A	
SCALE: 1:100		WEIGHT:	SHEET 1 OF 2

	VEHICLE DESCRIPTION		FRONT AXLE		REAR AXLE		FUEL LOAD ADJ. DATA (F.L.A.)				
							FUEL CAP.	FUEL WGT PER GAL.			
	28FF36-212-24			3380	6100		55	6			
	WB	PER IN. VALUE CALC.		AXLE WEIGHTS			FUEL AMT.	WGT OF FUEL	FUEL ADJ. AMT.		
	212	0.47		LEFT FRONT	RIGHT FRONT		1.00	330	-330.00		
	AXLE CAPACITIES			2210	1974	FUEL TANK CENTER					
	FRONT	REAR	TOTAL	LEFT REAR	RIGHT REAR		202.63				
	5000	9600	14500	2635	2969						
	STREETSIDE					CURBSIDE					
DESC.	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DESC.
DRIVER	44	150	20.75%	118.87	31.13			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
FW Mid-Back	98.9	352.5	46.65%	188.06	164.44	98.9	352.5	46.65%	188.06	164.44	FW Mid-Back
FW Mid-Back	134.9	352.5	63.63%	128.20	224.30	134.9	352.5	63.63%	128.20	224.30	FW Mid-Back
FW Mid-Back	170.9	352.5	80.61%	68.34	284.16	170.9	352.5	80.61%	68.34	284.16	FW Mid-Back
FW Mid-Back	206.9	352.5	97.59%	8.48	344.02	206.9	352.5	97.59%	8.48	344.02	FW Mid-Back
FW Mid-Back	242.9	352.5	114.58%	-51.38	403.88	242.9	352.5	114.58%	-51.38	403.88	FW Mid-Back
FW Mid-Back	278.9	352.5	131.56%	-111.24	463.74	278.9	352.5	131.56%	-111.24	463.74	FW Mid-Back
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
TOTAL PASSENGER LOAD				349.32	1915.68				230.46	1884.54	4380.00
	AXLE WEIGHTS			2210.00	2635.00				1974.00	2969.00	9788.00
	No Lift, Valeo 70k Rooftop Condesner;										
				FRONT	REAR	LEFT/RIGHT TOTALS	LEFT/RIGHT %'S				
			LEFT	2559.32	4550.68	7110.00	0.502	ICE 28' 212"WB			
			RIGHT	2204.46	4853.54	7058.00	0.498				
			FRT / REAR TOTALS	4763.78	9404.22	14168.00		ESTIMATION			
			AXLE CAPACITIES	5000	9600	14500					
			AVAILABLE CAPACITIES	236.22	195.78	332.00					



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/4$
ANGULAR MACH ± 1
TWO PLACE DECIMAL ± 0.03
THREE PLACE DECIMAL ± 0.01

	NAME	DATE
DRAWN		9/20/2023
QUANTITY		
	MATERIAL	
	THICKNESS	
	FINISH	
	DO NOT SCALE DRAWING	

TITLE:

SIZE **B** DWG. NO. 28FFWC36212 - 18+2 - Rear Lift

REV **A**

SCALE: 1:25

WEIGHT:

SHEET 1 OF 2

	VEHICLE DESCRIPTION			FRONT AXLE		REAR AXLE		FUEL LOAD ADJ. DATA (F.L.A.)			
	28FFWC36212 18 + 2 Rear lift			3380	6100		55	6			
	WB	PER IN. VALUE CALC.		AXLE WEIGHTS			FUEL AMT.	WGT OF FUEL	FUEL ADJ. AMT.		
	212	0.47		LEFT FRONT	RIGHT FRONT		1.00	330	-330.00		
	AXLE CAPACITIES			2210	1869	FUEL TANK CENTER					
	FRONT	REAR	TOTAL	LEFT REAR	RIGHT REAR		202.63				
	5000	9600	14500	2635	3520						
	STREETSIDE					CURBSIDE					
DESC.	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DISTANCE (IN.)	WEIGHT (LBS.)	% REAR AXLE	FRONT	REAR	DESC.
DRIVER	44	150	20.75%	118.87	31.13			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
FW Mid-Back	96.375	352.5	45.46%	192.25	160.25	101.875	352.5	48.05%	183.11	169.39	FW Mid-Back
FW Mid-Back	130.75	352.5	61.67%	135.10	217.40	139.875	352.5	65.98%	119.92	232.58	FW Mid-Back
FW Mid-Back	164.75	352.5	77.71%	78.56	273.94	177.875	352.5	83.90%	56.74	295.76	FW Mid-Back
FW Mid-Back	198.75	352.5	93.75%	22.03	330.47	215.875	352.5	101.83%	-6.44	358.94	FW Mid-Back
FW Mid-Back	232.75	352.5	109.79%	-34.50	387.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
W/C	266	200	125.47%	-50.94	250.94	266	200	125.47%	-50.94	250.94	W/C
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
			0.00%	0.00	0.00			0.00%	0.00	0.00	
TOTAL PASSENGER LOAD				461.37	1651.13				302.39	1307.61	3722.50
	AXLE WEIGHTS			2210.00	2635.00				1869.00	3520.00	10234.00
	Rear Lift, Valeo 70k Rooftop Condesner;										
				FRONT	REAR	LEFT/RIGHT TOTALS	LEFT/RIGHT %'S				
			LEFT	2671.37	4286.13	6957.50	0.499	ICE 28' 212"WB			
			RIGHT	2171.39	4827.61	6999.00	0.501				
			FRT / REAR TOTALS	4842.76	9113.74	13956.50		ESTIMATION			
			AXLE CAPACITIES	5000	9600	14500					
			AVAILABLE CAPACITIES	157.24	486.26	543.50					



ENDERA ORDER FORM

+1 419.523.3593
804 N. Pratt St.
Ottawa, OH 45875

Date:

Sales: 303-880-2788
reid@enderacorp.com
Warranty / Parts: 419-523-3593

CUSTOMER INFORMATION

SHIPPING / PAYMENT INFORMATION

Customer Pick Up: ☐ Ship Best Way to Location Below: ☐

Customer:
Address:
City, St. Zip:
Contact:
Phone:
Fax:
P.O. #:

Ship To:
Address:
City, St. Zip:
Contact:
Phone:
Payment:

Additional
Shipping
Instructions

ARE FTA FUNDS USED?		FTA INFO REQUIRED
YES or NO	<input type="text"/>	

Is this for a contract?	YES or NO	Model Number:	Number of units in this order:
	<input type="text"/>	Description:	
	<i>If YES please complete the fields to the right</i>	Seating Capacity:	
		16+2	5

End User Information

Name:
Address:
City, St. Zip:

Applicable FIN / FAN Code:

Pricing and specs subject to change without notice - COD or approved financing only - FOB Ottawa, OH

CHASSIS PRICING

QTY	CHASSIS PRICE ADDED	Price	Extended
	Ford E450, 176" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Ford E450, 158" WB, 7.3L V-8 Gas Engine, 14,500 GVWR, Door Delete		
1	Chassis Transfer Fee		
	Transferring Chassis To What Dealer		
	Less: Applicable Government Bid Assistance		
	Less: Applicable Fleet Allowance		
	Less: Applicable Commercial Retail Allowance		
	Less: Commercial Upfit Allowance		
1	Less: Mobility Allowance		
	Less: PNI Allowance		
	Total Net Chassis (Plus any special options noted below):		
	Grand Total Net Chassis Price:		

BASE CONVERSION				
QTY			Price	Extended
Endera - FORD E450 - Raised Floor				
	1	28', E450, 212" WB, 14,500 GVWR		
BODY / CONVERSION OPTIONS				
Option #	QTY	Option Description	Price	Extension
PARATRANSIT OPTIONS				
	1	Rear Lift - ADA with Double Wheel Chair Doors, Windows, Shift Interlock & Lights		
BRAUN WHEELCHAIR LIFTS				
	1	Braun Century - NCL3454-2 Lift, 34"x54", 1000# with Front Pump & Safety Belt		
Q-STRAINT W.C. SECUREMENT KITS				
	2	Q-8100-A1T-L - QRT DELUXE Retractable Shoulder / Lap Belt Combo - L Track		
	2	Order with Scooter Kit		
	2	Retractable hieght adjusters		
MISCELLANEOUS PARATRANSIT ACCESSORIES				
	1	Q-Straint Belt Cutter (Ship Loose)		
	8	Q-Straint 14" Quick Strap/Webbing Loop		
	1	Hazard Lights to flash when wheelchair door is opened		
FLOORING				
	1	Gerflor Tarabus Sirius CONFIRM COLOR AT ORDER, 2.5 mm Thick		
	1	Yellow Step Nosing (order grit style)		
	1	Standee Line Behind Driver at Entrance Stanchion w/ Decal		
	1	Heated Entry Step-Well		
	1	Aluminum subfloor		
	1	3/4" Marine Grade Plywood		
ELECTRICAL				
	1	Red Indicator Lights above each Emergency Exit (Total of 4)		
	1	Back Up Alarm		
	1	Pull Cord Passenger Stop Indicator with Touch Tape		
	1	Stop Request Sign in Driver's Area		
	1	Two Way Radio prep Package (no hot wire, pull cord, ground, and conduit only)		
	1	Skirt Mounted Battery Box with Slide Out Battery Tray - Stainless		
	1	Hour Meter		
	1	Digital Clock installed above front bulkhead door (visible to passengers)(8"X3" min)		
EXTERIOR LIGHTS				
	1	Midship Turning Lights		
	1	Fog Lamps		
	1	Strobe light roof mounted		
	1	Additional Exterior WC Door Light		
AUDIO / VISUAL				
	1	Radio AM/FM/USB/BT-OEM Ford		
	1	Rosco Backup Camera with 7" Monitor		
	1	PA - 40 Watt Panel Mount System wired to speaker, Gooseneck Microphone, External Speaker		
	1	Intermotive Fast Idle (AFIS), No Interlock		
	1	AngelTrax Vulcan V12 HDIP Mobile DVR 6 Camera System with 1TB hardrive		
	1	Lockable box to mount DVR System		
	1	2 additional speakers (6 total for pax compartment)		
DOORS / WINDOWS				
	1	Rear Door (32"x54") - With Window		
	1	Transign Front Destination Sign		
	1	Transign Side Destination Sign		

	1	Vented Windows with Flush Side Slider (All windows)		
	1	<i>Hold Open Latch for bulkhead storage compartment</i>		
		CHASSIS / EXTERIOR		
	1	Heavy Duty 12" Driver's Step		
	1	Front Mud Flaps		
	1	MorRyde RS Rear Suspension		
	1	Exterior Mirrors, Rosco Remote Power - Heated, RH & LH, Black Arms (Exchange)		
	1	Locking Fuel Fill Door		
	1	Valve Stem Extender Inner Dual Rear Wheel, pair		
	1	Alignment Certification Post-Production		
	1	<i>Intermotive EMS System (engine monitoring and shutdown system)</i>		
	1	<i>2" Rubber Rub Rail installed at floor level</i>		
		SIDEWALL / CEILING / HATCH		
	1	Roof Hatch - Transpec 1075 Series Dual Purpose Safety Vent II to Match Ceiling		
		INTERIOR		
	1	Interior Flat Mirror 6" x 16"		
	1	Farebox pre-wire to modesty panel behind driver		
	1	<i>Fresnal Lens on flat mirror</i>		
		CLIMATE CONTROL		
		VALEO CLIMATE CONTROL A/C SYSTEMS		
		Valeo DUAL COMPRESSOR SYSTEMS - SKIRT CONDENSER		
	1	90K BTU Total - Valeo-R476021 - Dual Compressors, Skirt Cond., Ceiling Evap.		
		CABIN HEATERS		
	2	Valeo 70K BTU, 3 Speed-Mounted Under Seat With Shut Off Valves		
		MISCELLANEOUS - HEATER & A/C ACCESSORIES & FANS		
	1	Heater Booster Pump, Includes Electric Water Valve in lieu of Manual Valves		
	1	Defroster Fan - Mounted in Driver's Area		
		SAFETY OPTIONS		
	1	5 Lb. ABC Fire Extinguisher w/ Bracket		
	1	Bi-Directional Reflective Triangles		
	1	25 Unit First Aid Kit w/ Plastic Waterproof Case, ANSI 2009		
	1	Bloodborne Pathogen Kit / Body Fluid Kit		
	1	Decal - "Please Fasten Your Seat Belt"		
	1	Decal - "Vehicle Height Sticker"		
	1	Decal - "No Smoking"		
	1	Decal - "Watch your step" placed on step riser		
	1	<i>Decal - "In Emergency, Dial 911" Placed on driver modesty panel</i>		
	1	<i>Decal - "Emergency equipment" Ship loose</i>		
		GRAB RAIL / STANCHION / PANELS		
	1	Ceiling Grab Rail Curbside (ADA requirement)		
	1	Ceiling Grab Rail Streetside		
	1	Stanchion Behind Driver with Modesty Panel and 1/4" Plexiglass Panel		
	1	Modesty Stanchion in Front of Rear Lift		
	3	Gray Padded Modesty Panel (each)		
	1	<i>3-Padded Stanchion Poles-Vertical-Yellow</i>		
		MISC OPTIONS		
	1	Ford E-450 Spare Tire (Placed Loose in Back of Bus)		
	2	Document protectors Mounted on front bulkhead		
	1	<i>Tectl Undercoating</i>		
	1	<i>Set of Wheel Chocks</i>		
		EXTERIOR GRAPHICS		
	1	Decal - "This vehicle stops at all railroad crossings"		

	1	Decal - "This vehicle makes frequent stops"			
	1	Decal - "Caution: Loading and Unloading Passengers" 1.25" white lettering on red background			
		SEATING			
		DRIVER'S SEATING			
	1	Ford OEM Driver's Seat, Recovered to Match Passenger Seats, Manual Pedestal			
	1	Adnik Power Seat Base w/ Skirt - Required w/ USSC G2, Shield & Shield Sport Driver Seats			
		OEM DRIVER SEAT RE-COVERED TO MATCH PASSENGER SEATS FREEDMAN SHIELD & LO CAM DRIVER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	1	Driver Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEAT FABRICS **EUROPEAN OR AMERICAN WOOL QUOTED AT TIME OF ORDER**			
	16	Seat Cover - Level 4	Oxen Grey STD If none selected		
		PASSENGER SEATING			
		FREEDMAN FEATHERWEIGHT STANDARD RIGID SEATS			
	7	Featherweight Mid-High Double Seat			
		FREEDMAN FLIP AND FOLDAWAY SEATS			
	1	BV Foldaway Seat - Notch Back Double			
		ICS - CHILD RESTRAINT SEATS <u>**REQUIRES WEIGHT ANALYSIS**</u>			
	1	Double Seat, (2) Integrated Child Seats			
		SEAT OPTIONS			
	16	ABS Plastic Seat Backs Per Person (Mid-High and Notchback Folds Only)			
	16	AV Grab Handle, Black - Each (PPE Material)	on: All Seats		
	8	Flip-Up US Armrest, Black - Each (PPE Material)	on: Aisle Seats		
	1	ICS Seat instructions printed on seat in english and spanish			
		SEAT BELTS			
	16	Seat Belt, USR Freedman Retractable (Per Person) N/A Foldaway or Flip Seats			
	2	Seat Belt Extension, 12"			
		OTHER OPTIONAL EQUIPMENT & FEATURES			
	2	Parts book, operations manual, maintenance manual, wiring schematic			
	1	Certified Weight Slip			

PRODUCTION NOTES / INSTRUCTIONS	

TOTAL CONVERSION PRICE			
LESS MANUFACTURER DISCOUNT APPLIED			
NET CONVERSION PRICE			
TOTAL BUS PRICE (Includes Chassis)			
FREIGHT CHARGE (Minimum \$350.00)	Miles:		\$ 1.65
PLEASE NOTE: Actual delivery fees are subject to change at time of shipment, due to fuel prices			
GRAND TOTAL BUS PRICE			
DEPOSIT			
NET DUE			

AUTHORIZED CUSTOMER SIGNATURE

Delivery Date Requested:

Delivery Date Approved:

AUTHORIZED ENDERA AUTOMOTIVE SIGNATURE

DATE

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ DMT2400000007

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 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 checked="" 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 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.

Western Reserve Coach Sales Inc

Company



Authorized Signature

5-30-24

Date

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

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ ADJ2400000015

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.

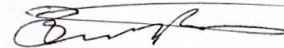
Addendum Numbers Received:

(Check the box next to each addendum received)

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

Western Reserve Coach Sales INC
Company



Authorized Signature

5-30-24

Date

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

CRFQ - Exhibit A PRICING PAGE

<30' Length Cutaway Bus Transit Vehicles	
--	--

VENDOR NAME:				
Manufacturer/ Brand:				
		Unit Price	Estimated	
Class	Item Description	Per Vehicle	Quantity	Extended Price
A	Bus; 450/4500 chassis - twelve passengers, two wheelchair spaces.	\$138,909.00	10	\$1,389,090.00
B	Bus; 450/4500 chassis - sixteen passenger, two wheelchair spaces	\$144,879.00	5	\$724,395.00
C	Bus; 450/4500 chassis - eighteen passengers, two wheelchair spaces	\$148,749.00	5	\$743,745.00
D	Bus, 450/4500 chassis - twenty to twenty-two passengers, no lift	\$138,967.00	3	\$416,901.00
E	Bus, 450/4500 chassis - twenty-three to twenty-five passengers, no lift	\$139,582.00	3	\$418,746.00
			TOTAL	\$3,692,877.00
*Complete Form provided.				
*Please note these are only estimated quantities and do not reflect any guarantee of purchase.				
*The WV DMTF-PT may purchase more or less as needed.				

CRFQ - Exhibit A PRICING PAGE

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*Please note these are only estimated quantities and do not reflect any guarantee of purchase.				
*The WV DMTF-PT may purchase more or less as needed.				

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.

(Printed Name and Title) BENJAMIN RYAN

(Address) 12347 MARLBORO AVE NE ALLIANCE OH 44601


(Phone Number) / (Fax Number) 330 935 0844 / 330 935 0842

(email address) ben@buspro1.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract 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/Contract 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 this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; 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.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

WESTERN RESERVE COACH SALES ALLIANCE OH 44601
(Company)

BENJAMIN RYAN 
(Signature of Authorized Representative)

BENJAMIN RYAN 5-30-2024
(Printed Name and Title of Authorized Representative) (Date)

330 935 0844 330 935 0842
(Phone Number) (Fax Number)

ben@buspro1.com
(Email Address)

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #1

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: _____

Address: _____ WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B
ALLIANCE, OH 44601

Telephone: _____ 1-877-287-7761 _____

Name: _____

Address: _____

Telephone: _____

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

Name: _____ WESTERN RESERVE COACH SALES

Address: _____ 12347 MARLBORO AVE. NE STE. B
ALLIANCE, OH 44601

Telephone: _____ 1-877-287-7761 _____

Name: _____

Address: _____

Telephone: _____

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #2

CERTIFICATION FOR AIR & WATER POLLUTION

The Vendor certifies that the vehicles proposed:

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

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

Date

5/30/24

Authorized Signature

Mark E. Ryan

Title

V. President

WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B

Company Name

ALLIANCE, OH 44601

REQUEST FOR QUOTATION
<30' Length 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.

_____ 5/31/24
Date

_____ Mark E. Ryan
Authorized Signature

_____ V. President
Title

WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B
ALLIANCE, OH 44601

_____ Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #4

**BUY AMERICA CERTIFICATION
ROLLING STOCK**

Certificate of Compliance

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

5/30/24
Date

Mark E. Ryan
Authorized Signature
WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B

Company Name ALLIANCE, OH 44601
MARK E. RYAN

Name
V. President
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
<30' Length Cutaway Bus

BID FORM #5

**FEDERAL MOTOR VEHICLE
SAFETY STANDARDS CERTIFICATION**

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

5/30/24
Date

Mark E. Ryan
Authorized Signature

V. President
Title

WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B
ALLIANCE, OH 44601
Company Name

REQUEST FOR QUOTATION

<30' Length Cutaway Bus

BID FORM #6

U.S. Comptroller's Debarment List Certification

WESTERN RESERVE COACH SALES

12347 MARLBORO AVE. NE STE. B

ALLIANCE, OH 44601

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>.

5/30/24

Date

Mark E. Ryan

Authorized Signature

V. President

Title

WESTERN RESERVE COACH SALES

12347 MARLBORO AVE. NE STE. B

ALLIANCE, OH 44601

Company Name

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #7

**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), WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B (COMPANY NAME) certifies to the best
ALLIANCE, OH 44601 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),
WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B, CERTIFIES OR AFFIRMS THE
ALLIANCE, OH 44601 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.

Mark E. Ryan V. President

Signature and Title of Authorized Official

REQUEST FOR QUOTATION
<30' Length Cutaway Bus

BID FORM #8

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

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

5/30/24
Date

Mark E. Ryan
Authorized Signature

V. President
Title

WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B
Alliance, OH 44601
Company Name

SPECIFICATION COMPLIANCE

NOTE: Please check if what is offered is in exact compliance with specifications. **Any discrepancies required 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
<30' Length Cutaway Bus

BID FORM #9

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.

WESTERN RESERVE COACH SALES
12347 MARLBORO AVE. NE STE. B

The (Vendor, Contractor) ALLIANCE, OH 44601, 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.

Date

5/30/21

Authorized Signature

Mark E. Ryan

Title

V President