



901 Commerce Road • P.O. Box 524 www.MidwestFire.com Luverne, MN 56156 • 1.800.344.2059

PURCHASE CONTRACT

December 27th, 2023

Town of Dundee
202 E Main St
PO Box 1000
Dundee, FL 33838

Midwest Fire Sourcewell Contract:
Town of Dundee Sourcewell Membership:

113021-RCK
138559

Dear Customer:

We hereby propose and agree to furnish, after your acceptance of this proposal and the proper execution by: Town of Dundee (“Customer”) and an officer of Midwest Fire Equipment & Repair Co. (“Midwest Fire”) the following apparatus and equipment:

One (1) Midwest Fire All-Poly Series Mini-Pumper and One (1) New Ford F550 Crew Cab 4x4 Chassis

All of which are to be built in accordance with the specifications, clarifications and exceptions attached, and which are made part of this agreement and contract, to be completed same in: 260 business days after receipt of truck chassis by Midwest Fire, subject to all causes beyond our control.

Apparatus	
Apparatus Proposal Price	\$ 275,164
Chassis Proposal Price	\$ 80,656
Sourcewell Pricing	\$ (13,759)
Apparatus & Chassis Proposal Price	\$ 342,061
Total Proposal Price:	\$ 342,061.00

NOTE: CHASSIS PRICING IS ESTIMATED FOR THE CURRENT MODEL YEAR. DUE TO VENDORS INCREASE IN PRICING, GOVERNMENT MANDATES (EPA, ETC.), OR MODEL YEAR ACTUAL PRICING DIFFERS, PRICING WILL BE RE-PRICED UPON MIDWEST FIRE RECEIPT OF CHASSIS INVOICE FROM OEM.

Midwest Fire has accounted for an additional \$5,000 in surcharges and price increases from Chassis OEM in the Chassis Proposal Price. Any amount less than the Chassis Proposal Price on the final chassis invoice will be credited back to the Town of Dundee on the final payment. Any amount exceeding the Chassis Proposal Price on the final chassis invoice will be the responsibility of the Town of Dundee.

Customer is responsible for taking possession of the apparatus and/or equipment at the Midwest Fire location in Luverne, Minnesota, unless otherwise agreed to in a writing signed by Midwest Fire and Customer.

Terms:

A deposit in the amount of \$10,000 shall be paid within 10 business days upon acceptance of this Proposal by the Customer.

The balance of the value of the chassis less the deposit shall be paid within 10 business days of Midwest Fire receiving formal notification that chassis is complete from the OEM.

Customer is responsible to pay the remaining balance in full upon acceptance of apparatus.

Midwest Fire will honor the price & terms quoted in this purchase contract for a period of 30 days from the date noted above. Beyond the contract deadline date, all pricing and terms are subject to change.

Pre-Construction Meeting:

Within twenty-one calendar days after contract signing, Customer is responsible to join Midwest Fire for an in person, conference call or video based, Pre-Construction Meeting to review project specifications in depth. Midwest Fire will support the Pre-Construction meeting with the Lead Salesperson for the project, Project Manager, and Subject Matter Experts as required. Any changes made to the project during the Pre-Construction meeting will be calculated at standard pricing. No change order fee is charged.

Change Orders:

Any change to the apparatus and/or equipment after the contract is signed will require a change order. After the Pre-Construction meeting is held, any future change will be subject to a minimum change order fee of \$500 (processing, engineering changes, documentation), plus the change order cost. Any returned parts may be subject to a restocking fee and depending on the lead time of items included on the change order, the completion date of the apparatus may change.

Force Majeure:

Neither party shall be liable or responsible to the other party, or be deemed to have defaulted under or breached this contract, for any failure or delay in fulfilling or performing any term of the contract (except for any obligation to make payments to the other party hereunder), when and to the extent such party's failure or delay is caused by or results from the following events: (1) acts of God; (2) flood, fire, earthquake, tornado, or explosion; (3) war, invasion, hostilities, terrorist threats, or acts, riot, or other civil unrest; (4) government order, law, or action; (5) embargoes or blockades in effect on or after the date of this contract; (6) national or regional emergency; (7) strikes, labor stoppages or slowdowns, supply chain shortages or disruptions, unforeseen price changes and cancellations by OEMs, or other industrial or manufacturing disturbances; or (8) power outages or shortages, inadequate transportation services, or inability or delay in obtaining supplies of adequate or suitable materials.

The party impacted by any of the above force majeure conditions shall give notice to the other party within five calendar days of learning of such condition(s), stating the period of time the occurrence is expected to continue. The party impacted by any of the above force majeure conditions shall resume the performance of its obligations as soon as reasonably practicable after the removal of the condition.

Taxes Responsibility of Customer:

Any and all sales, use, environmental, ad valorem, or excise tax or any other similar taxes, fees, duties, or charges of any kind imposed by any governmental authority on any amounts payable by Customer under this contract shall be the sole responsibility of Customer.

No Liability for Consequential or Indirect Damages:

Neither Midwest Fire nor its representatives is liable for consequential, indirect, incidental, special, exemplary, punitive or enhanced damages, lost profits or revenues, or diminution in value, arising out of or relating to any breach of this contract, regardless of whether such damages were foreseeable or whether or not Midwest Fire was advised of the possibility of such damages.

Binding Effect: This contract shall be binding upon and inure to the benefit of the parties hereto and their respective successors, assigns, heirs, and beneficiaries. No amendment or modification of this contract is effective unless in writing and signed by each party.

Governing Law: This contract shall be governed by the laws of the State of Minnesota.

Entire Agreement: This contract, and any change orders, constitutes the sole and entire agreement of the parties with respect to the subject matter contained herein and supersedes all prior and contemporaneous understandings, agreements, representations and warranties, both written and oral, with respect to such subject matter.

Severability: If any term of this contract is invalid, illegal, or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect any other term or provision of this contract or invalidate or render unenforceable such term or provision in any other jurisdiction.

Jurisdiction and Venue: Any claims, causes of action, disputes, legal proceedings, or litigation arising between the parties arising under or in connection with this contract or the formation thereof shall be brought solely in Rock County, Minnesota. Customer, by entering into this contract, hereby submits and consents to jurisdiction in the State of Minnesota.

Exclusion of Warranties: EXCEPT AS OTHERWISE PROVIDED TO CUSTOMER IN WRITING, THERE ARE NO OTHER WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS CONTRACT, AND CUSTOMER ACCEPTS APPARATUS AND/OR EQUIPMENT "AS IS."

Respectfully submitted,

Sarah J. Atchison
President & CEO
Midwest Fire Equipment & Repair Company

We, the Customer, agree to accept the above proposal and hereby enter into the purchase contract with signature below:

Customer/Business Name (please print)

Business Address

Printed Name

Signature

Date

Title



NOTICE

FINAL SPECIFICATIONS: Attached you will find the final & comprehensive specifications for your truck. Read them carefully. This document serves as formal notice that the attached specifications provide the entire scope of work & design for the truck that Midwest Fire Equipment & Repair Company (Midwest Fire) is manufacturing for you. Any & all equipment, features, accessories, mounts, graphics, etc. to be included with your truck is/are detailed in this final specification document.

CHANGE ORDERS: The attached specifications are final & comprehensive. The project design for this truck is officially frozen (Design Freeze) as of this date. **Any future changes must be mutually agreed upon through an official written Midwest Fire Change Order, executed (signed) by both Midwest Fire & the purchaser. Further, the purchaser understands that any future design changes may impact both project cost and timeline.** Purchaser will hold Midwest Fire harmless from any potential liability incurred as a result of project delays resulting from any Change Orders.

IF THE EQUIPMENT/ITEM/FEATURE IS NOT DETAILED IN THE SPECIFICATIONS FOR YOUR TRUCK AND YOU DO NOT HAVE A CHANGE ORDER, SIGNED BY BOTH YOU & MIDWEST FIRE, DETAILING THE CHANGE/ADD OF THE EQUIPMENT/ITEM/FEATURE FOR YOUR TRUCK, IT WILL NOT BE INCLUDED ON YOUR TRUCK.

FINAL PAYMENT, TRANSFER OF OWNERSHIP & TRAINING: The Purchase Contract states clearly that:

- 1) at the conclusion of your project & prior to taking possession, you will pay the balance remaining on the purchase price of your truck, in full.**
- 2) you will take physical possession of the truck & receive any & all training on the operation of your truck at the Midwest Fire facility in Luverne, Minnesota.**

I hereby acknowledge that I have received & fully understand the above information.

Purchaser

Date



MIDWEST FIRE®

**300 Gallon All-Poly® Series
Mini Pumper Specifications**

Prepared for: Dundee Fire Department

Dundee, FL

Midwest Fire Rep: Newt Johnson

December 27th, 2023

QMS-WIN-022 Rev Q

Notes:

Date	Change Order #	Op Number	Description	Rev

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1.00 Booster Tank

The tank shall be constructed of 1/2" thick high-impact, polypropylene sheet stock. The material shall be of a certified, high quality, non-corrosive, stress relieved thermoplastic, black in color, and UV stabilize for maximum protection.

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of polypropylene with a molded cover. The tower shall be located on the curb side rear corner of the tank. Inside of the fill tower approximately 2" down from the top shall be fastened a combination vent/overflow pipe which shall be of standard schedule 40 polypropylene pipe with minimum ID of 4" designed to run vertically through the tank. The transverse swash partitions shall be manufactured of 3/8" polypropylene which shall interlock with a longitude partition constructed of 1/2" polypropylene.

There shall be one (1) 1/4" deep X 6 1/2" diameter recess in floor to act as sump.

Two slotted mounting pads on top of tank for mount addition equipment.

Tank fill couplings backed with flow deflectors to disperse the stream of water entering the tank, and capable of withstanding sustained fill rates of up to 1.000 G.P.M. at 100 PSI maximum.

All auxiliary outlets and inlets must meet NFPA 1900 guidelines in effect at the time of manufacture.

The tank is affixed to the cradle utilizing hat channel mounting brackets constructed of 1/4" thick stainless-steel. The channels are mounted beneath the center of the tank before and after the cross members of the cradle. The channel is surrounding these members and is bolted directly to the bottom of the tank thereby securing the tank to the cradle.

There shall be a 3/4" FNPT female tank drain located on the rear tank.

1.00.05 All-Poly Series 300 gallons

THE TANK WILL CARRY A LIFETIME WARRANTY FROM ITS MANUFACTURER

SECTION 2: BOOSTER TANK PIPING, FILLS, & GAUGES

2.02 Tank Level Gauge

- Pressure transducer mounted on the outside of the tank. Sealed foam tanks (if so equipped) will require zero pressure vacuum vents.
- Super bright LED display viewable from 180 degrees with a visual indication at multiple accurate levels.
- Weather resistant connectors to connect to the digital display, the pressure transducer, and the apparatus power. Additional displays are easily integrated and will receive data from the same source as the Master Display; no additional transducers required.
- Tank level gauge indicates the liquid level on easy-to-read LED display.

2.02.00.03 Tank level gauges always on.

All tank level gauges will be activated and always on once the Ignition is engaged.

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- 2.02.08 One (1) Innovative Controls Soft Glo Series Water Tank Level Gauge
2.02.08.01 Installed on the street side pump panel. – Master

SECTION 5: BODY AND COMPONENTS

Body

- The body will be attached to the sub-frame using rigid fasteners isolated by fitted rubber bushings.
- The mounting system provides secure attachment of the body to the sub-frame while allowing enough range of movement between the two assemblies.
- The body will be enclosed on all sides and incorporate closed wheel wells and finished storage compartments.
- Front lower vertical surface of body protected with aluminum Tread-Brite.

Tank

- The tank is manufactured as separate entity and then welded to the body for additional strength.

Fenders

- Fenders will be integral with the side of the body.
- Fender wells are constructed with full circular copolymer polypropylene thermoplastic inner liners for ease of cleaning and maintenance.

Materials

- The entire body is fabricated from non-corrosive, stress-relieved virgin copolymer polypropylene thermoplastic material.
- All exterior body joints and seams are extrusion welded.
- All welds will conform to DVS and AWS standards.
- All joints, seams, and welds will be tested for integrity and are certified to be free from defects.
- All joints and are 100 percent welded inside and out; no skip welding is permitted.

THE BODY WILL CARRY A LIFETIME WARRANTY FROM ITS MANUFACTURER

5.00 Fenderettes

Bright polished aluminum fenderettes are installed on the wheel wells to prevent splash and enhance appearance. The fenderettes extend approximately 1" beyond the body side and are designed to be replaced. All fasteners will not be exposed to the exterior of the fenderettes or body.

5.00.03 Black Powder Coated Fenderettes

5.01 Rub Rail

The bottom edge of the entire apparatus will have an aluminum rub-rail installed including the rear step and pumphouse, if applicable. The rub-rail is replaceable, made from solid extruded aluminum and features a reflective stripe at the rail center.

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5.03 Cradle

An all-aluminum cradle is engineered and constructed to connect the chassis frame with the copolymer tank and body. The cradle is constructed using extruded aluminum tubing .25" thick and extruded aluminum flats .375" thick. Cradle cross members are spaced to restrict unsupported portions of the tank and body between cross members to a maximum of 550" squared. There are cushioned rubber extrusions placed over all tank support areas to isolate the tank from the aluminum cradle.

SECTION 6: BODY COMPARTMENTS

6.00 Street Side Compartments

- A sweep-out style compartment provided on the street side integral to the body, constructed using white copolymer material.
- Each compartment will have an anodized aluminum roll-up door, door activated LED compartment lights, corrosion resistant vents, black Turtle Tile plastic dry decking, and floor drains.
- The side compartments are 19" deep from the floor level to the top of the chassis frame rails, and 24" deep above the chassis frame.

6.00.03 Street Side Front Full Height Compartment

Compartment is located on the street side, ahead of the rear wheels.

- 6.00.03.03 With a 24" Pumphouse: approximate inside dimensions are 26" wide by 61" tall by 24" above frame rails, 19" deep from the floor of the compartment to the top of the chassis frame rails, the compartment is not transverse above the frame rails. (84" Cab to Axle)

6.00.10 Street Side Rear Full Height Compartment

Compartment is located on the street side, behind the rear wheels. Approximate inside dimensions are 35" wide by 61" tall by 24" above frame rails, 19" deep from the floor of the compartment to the top of the chassis frame rails.

6.00.11 Street Side Over Wheel Compartment

Compartment is located on the street side, above the rear wheels. Approximate inside dimensions are 51" wide by 34" tall by 24" deep.

6.01 Curb Side Compartments

- A sweep-out style compartment provided on the curb side, integral to the body, constructed using white copolymer material.
- Each compartment will have an anodized aluminum roll-up door, door activated LED compartment lights, corrosion resistant vents, black Turtle Tile plastic dry decking, and floor drains.
- The side compartments are 19" deep at the floor level and 24" deep above the chassis frame.

6.01.03 Curb Side Front Full Height Compartment

Compartment is located on the curb side, ahead of the rear wheels.

6.01.03.03 With a 24" Pumphouse: approximate inside dimensions are 26" wide by 61" tall by 24" above frame rails, 19" deep from the floor of the compartment to the top of the chassis frame rails, the compartment is not transverse above the frame rails. (84" Cab to Axle)

6.01.10 Curb Side Rear Full Height Compartment

Compartment is located on the street side, behind the rear wheels. Approximate inside dimensions are 35" wide by 61" tall by 24" above frame rails, 19" deep from the floor of the compartment to the top of the chassis frame rails.

6.01.11 Curb Side Over Wheel Compartment

Compartment is located on the street side, above the rear wheels. Approximate inside dimensions are 51" wide by 34" tall by 24" deep.

6.02 Compartment Options

6.02.03 Adjustable shelf

One (1) adjustable shelf made of 3/16" smooth aluminum, installed with Unistrut adjustable brackets in the compartments. Shelves will be made to the depth of the compartment they are positioned in and full width of door opening unless specified otherwise.

- 6.02.03.04 Rear, Street Side, Qty (1)
- 6.02.03.08 Rear, Curb Side, Qty (1)
- 6.02.03.10 Rear, Street Side, Upper, Qty (1)
- 6.02.03.11 Front, Curb Side, Upper, Qty (1)
- 6.02.03.12 Rear, Curb Side, Upper, Qty (1)
- 6.02.03.18 Front, Street Side, Upper, Qty (1)

6.02.10 SCBA Brackets (30 Min 2216/45 Min 4500)

SCBA brackets, Zico model #KD-UN-6-SF, mounted towards the front of the compartment unless otherwise specified. For use with most 30 Min 2216 PSI and 45 Min 4500 PSI tanks.

- 6.02.10.06 Over Wheel, Curb Side, Qty (2)

6.02.11 Spare SCBA Cylinder Holders

Spare SCBA cylinder holders are in the rear wheel well area. Cylinders are stored in 8" diameter holders with a max depth of 24", and with a stainless-steel hinged door with a positive latch. Door includes a seal for increased protection against weather elements.

- 6.02.11.05 Ahead of Rear Wheels, Curb Side, Qty One (1)
- 6.02.11.08 Behind Rear Wheels, Curb Side, Qty One (1)

6.09 Rear Center Compartment

- A sweep-out style compartment provided at the rear, integral to the body, constructed using white copolymer material.

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- Compartment will have an anodized aluminum roll-up door, door activated LED compartment lights, corrosion resistant vents, black Turtle Tile plastic dry decking, and floor drains.
- The side compartments are 19" deep at the floor level and 24" deep above the chassis frame.

6.09.01 Rear Center Compartment

Compartment is located at the rear of the body, above the frame rails, centered from side to side. The opening is facing rear. Approximate inside dimensions are 42" wide by 30" tall by 24" deep.

SECTION 7: RUNNING BOARDS AND REAR STEP

7.00 Running Boards & Chassis Steps

7.00.06 OEM Chassis Running Boards, one (1) set of running boards, provided by the manufacturer installed on the chassis for ease of entry.

7.02 Rear Step

The 6" deep rear step is NFPA compliant and made of embossed aluminum tread plate with a 7" tall kick plate.

SECTION 8: GRAB RAILS AND FOOTSTEPS

8.00 Grabs Rails

The grab rails are made of 1 ¼ " diameter extruded aluminum tubing with knurled finish and stanchion brackets.

8.00.01 Rear Grab Rails

Vertical grab rail(s) provided at the rear.

8.00.01.01 Two (2) Grab Rails, One (1) on each side.

8.00.04 Front Grab Rail - Street side

There is one (1) grab rail located on street side of tank in the upper front corner for ease of loading and unloading hose cross lays.

8.00.04.01 Front Grab Rail - Street side

8.00.05 Front Grab Rail - Curb side

There is one (1) grab rail located on curb side of tank in the upper front corner of tank for ease of loading and unloading hose cross lays.

8.00.05.01 Front Grab Rail - Curb side

8.00.11 Rear Horizontal Grab Rails

Horizontal grab rail(s) provide at the rear on the upper portion of the backside of body for ease of accessing the top of the apparatus.

8.00.11.01 One (1) Street Side

8.00.11.02 One (1) Curb Side

8.01 Access Steps

8.01.07 Hose Bed Folding Steps

Illuminated Folding Access Steps on the side of the rear center compartment door.

8.01.07.06 Chrome Plated, Folding Steps, Two (2) Curb Side, Two (2) Street Side

SECTION 9: ELECTRICAL EQUIPMENT

9.00 Apparatus Electrical

- Electrical Wiring
- The electrical compartment to be installed in the top front center of the body with a removeable cover. The body and chassis shall be wired as independent modules and connected as a completed unit at the final assembly via electrical connectors located in the electrical compartment. Seals shall be provided on each individual wire and the assembly. All wiring for the apparatus body shall be within a temperature resistance harness. All wires in each harness shall be color-coded. Wiring shall be run along structural rails and tied in a neat and orderly manner. A backup alarm will be wired into the reverse circuit to sound when the vehicle is placed in reverse. The key on position energizes a relay which acts as the master switch connecting the apparatus to the battery system, eliminating power drain while the truck is not in use.
- Overload Protection
- The apparatus circuits requiring load protection shall utilize sealed relays and automatic reset circuit breakers.

9.01 DOT Lighting Details

- A total of nine (9) LED clearance lights and seven (7) red LED lights installed at the rear.
- Two (2) amber LED lights are installed on the front street and curb sides.
- Reflectors are installed per DOT specifications.
- A red warning light visible to the driver in the chassis cab that illuminates when a compartment door is ajar/open.
- An illuminated license plate bracket installed at rear.

9.02 Lower-Level Rear Lighting

9.02.02 Tri-cluster Taillight Package

Two (2) LED Tri-Cluster combination include: red LED stop/tail/turn, clear LED backup light and LED warning light installed at the rear. Light assemblies provided in a three-light housing.

9.03 Antenna

9.03.02 Customer Supplied Antenna

Customer's antenna installed on the chassis roof behind the lightbar. Cable will be labeled and tied up inside the center console if a radio is not mounted. If a radio is mounted the antenna will be crimped and attached to the radio.

9.03.03 Customer Supplied Radio

Customer's radio and one speaker mounted only. The speaker will be mounted in an area that will not hinder audio. Power and programming will be the responsibility of the customer. The wires will be labeled and tied up in the center console. Mounting bracket(s) are to be supplied by customer.

9.03.03.01 Radio surface mounted in the center console behind the siren controls.

9.04 Camera System

9.04.01 Rear view camera

One (1) rear view camera system installed. Camera system includes a colored wide-angle rear mounted camera and 7" monitor mounted in the center of the vehicle's dashboard unless specified otherwise. Automatically activated when truck is put in reverse.

9.04.01.02 Rear View camera

9.06 Power Distribution Options

9.06.06 12V Power Strip

A 12V Battery Power, 6 position overload/short protected terminal strip will be installed in the front sill of the compartment unless specified otherwise.

9.06.06.09 Center Console, Inside, Wired to Battery (Kusmaul Required)

9.06.06.11 Center Console, Inside, Wired to Ignition

SECTION 10: EMERGENCY SIREN AND LIGHTING EQUIPMENT

10.00 Apparatus Controls

10.00.03 Center Console

Center console installed between driver and passenger seats.

10.00.10 Center Console Options

10.00.10.04 Cup Holders, two (2)

Cup holders installed in console between driver and passenger seats.

10.01 Light Bars:

The light bar is mounted on the cab roof.

10.01.5614 Federal Signal Fire/EMS Vision SLR Light Bar

The light bar is mounted on the cab roof. Modules will have clear lenses. The forward most module will be red and other modules will alternate white and red to the back. Model number: *VSLR53 - 5.8 in (132.8 cm) x 52.3 in (14.7 cm) x 30.2 in (76.7 cm)

10.02 Sirens:

10.02.04 Whelen Siren

Whelen Siren 200-watt, Class A electronic siren, mounted in the chassis cab in a location convenient to the driver. The electronic siren includes a 9-Switch Light Control (three (3) position slide switch and six (6) Push On/ Push Off switches) with 17 Scan-Lock™ Siren Tones, and hard-wired microphone. The siren control is lighted for easy night operation. Cast aluminum speaker available with three (3) siren mounting locations.

10.02.04.02 Whelen 295SLSA6 siren w/ speaker flush mounted street side

10.02.5731 Whelen Howler amplifier with one (1) Speaker, 2015-2023 F-550 Mounting Bracket

Whelen Howler Siren amplifier w/ one (1) speaker and 2015-2023 F-550 mounting bracket. It will be mounted towards the front of the truck underneath facing forward. The exact location is to be determined by Midwest Fire. A siren activation button will be installed on the center console for ease of access to the driver.

10.04 Lower-Level Lights

10.04.04 Front/Rear Whelen M6 Series LED

Two (2) Whelen M6 series lights mounted on the front and two (2) mounted on the rear of the body in the cluster. Lights will have clear lenses.

10.04.04.02 Front/Rear Flashers, Red, Chrome Bezel, M6 Series LED

10.05 Intersection Lights

All lights mounted a minimum of 18" from the ground, and no higher than 60". One (1) positioned as far forward on the hood as possible. One (1) positioned behind the cab but in front of the rear wheels if three (3) lights per side are requested, and one (1) positioned as close to the rear of the truck as practical. Lights will have clear lenses. *If there is a front bumper extension the lights will be mounted on the extension not the side of the hood.

10.05.03 Intersection, Red, Chrome Bezel, M6 Series LED, Two (2) each side

10.06 Upper-Level Rear Warning Lights

10.06.08 Whelen M9V2

Whelen M9V2 Series Combination LED Scene Light/Flasher. Lights will have clear lenses.

- 10.06.08.02 Side/Rear, Scene/Flashers, Red, Chrome Bezel, M9V2 Series, Two (2) each side of the tank in the front and rear upper corners, with two (2) on the rear of apparatus in the upper corners. (Six (6) Total)

10.09 Ground Lights

10.09.02 Six (6) ground lights

There are six (6) LED ground lights installed to illuminate the area below the apparatus. Two (2) lights are installed on street and curb side below the chassis steps, two (2) lights are installed on street and curb side below the pumphouse step, and two (2) lights are installed on street and curb side below the rear step area. Grounds lights will be activated when parking brake is applied.

SECTION 11: PAINTING, LETTERING, STRIPING, AND SIGNAGE

11.00 Painting process

The entire body, and components will be washed, sanded, prepped for primer, cleaned, and primed with PPG urethane primer filler. The body will be hand sanded and color match painted using a PPG Deltron base coat/clear coat paint. After paint is applied and properly cured the apparatus will be color sanded and buffed to a high gloss. The paint process is approved by PPG.

11.00.08 Paint Spray Out Request (Up to 3 Spray Outs)

11.00.5619 Two-Tone Paint on F550 Chassis

Paint for the F550 crew cab chassis in a two-tone scheme, blue over red. The chassis will be race red from the factory. Paint the top half blue. Paint samples will be sent to customer for color confirmation and customer will sign off on paint break location as well.

10-YEAR WARRANTY ON PAINTED BODY PARTS

11.01 ID plate

There is a permanent plate located in the center top chassis cab with the following information:

Quantity and type of fluids used in the vehicle. This plate includes:

- Engine oil, quantity.
- Engine coolant, quantity.
- Chassis transmission fluid, quantity.
- Pump transmission fluid, quantity.
- Drive axle lubrication fluid, quantity.
- Air conditioning refrigerant, quantity.
- Air conditioning lubrication oil, quantity.
- Power steering fluid, quantity.
- Front and rear cold tire pressure
- Number of personnel the vehicle is designed to carry located in an area visible to the driver.
- Height and length of the vehicle in feet and inches
- Gross vehicle weight rating (GVWR) in pounds

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11.03 Vinyl Lettering

11.03.01 Provided on the chassis doors:



11.03.04 Provided on the street and curb side of the tank:
"DUNDEE FIRE" in the same style and font as pictured below:



11.05 Reflective stripe

The apparatus body and chassis will have a reflective stripe on each side and the front per NFPA 1901 standards.

11.05.03 Reflective tape inside chassis doors- Per NFPA 1901 standards any door designed to allow persons to enter, or exit has a minimum of 96 square inches of retro-reflective material affixed to the inside of the door.

11.05.03.02 Crew Cab

11.05.04 (1x4x1) 4" wide Blue reflective stripe with a 1" wide white reflective stripe spaced approximately 1/2" above and below. Stripe will be straight on the body and chassis.

11.05.04.01 Single Axle

11.05.08 Ascending Z-Stripe - upcharge.

The stripe selected above will be installed as an ascending Z-stripe pattern. This option omits the previous statement "stripe will be straight on the body and chassis".

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11.06 Rear Chevron

11.06.04 Diamond Grade Pattern, Chevron 100%

Per NFPA 1901 standards, 100 percent of the rear will include red and fluorescent yellow diamond grade pattern chevron retro-reflective stripe installed, with each stripe a minimum of 6" wide.

SECTION 12: CORROSION PROTECTION AND MUD FLAPS

12.00 Corrosion Protection

The All-Poly Series body has several features which prevent corrosion.

- All fasteners are stainless steel where applicable.
- All fasteners which are used in aluminum are plated with Magnaguard 560 to prevent galvanic corrosion resulting from dissimilar metals.
- All contacts of dissimilar metals are insulated with 3M products to prevent galvanic corrosion.
- Rub rails are Type II bright dip anodized.
- Tow rings are cadmium plated steel.
- The Poly body material eliminates the need for undercoating and sprayed on coating inside storage lockers.
- The Poly body material is non-corrosive and is frequently used for storing acids.
- The Poly body material eliminates many possibilities of dissimilar metal contact caused by galvanic reaction.

12.01 Mud Flaps

There are two mud flaps installed behind the rear wheels.

- The mud flaps are ¼ inch thick black rubber.
- The bottom of the mud flaps is fitted with chrome weights.

SECTION 13: PUMP AND PLUMBING

13.00 Pump House

- Side Control Pump House

The pump compartment features:

- The superstructure frame is made from .125" wall X 2.00" square type aluminum tubing.
- The front and a portion of the rear of the pump compartment is made from aluminum tread plate sheets to enclose the perimeter of the water pump.
- There will be two (2) horizontal grab rails provided, one on each side, above the pump control panels.
- The street and curb sides of the pump compartment are equipped with side running boards. The running boards extend along the width of the pump compartment from the rear of the chassis cab to the forward end of the body module.
- Pump side panels are covered with black protective material.

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- Running boards include extruded aluminum rub rail extending the length of the running boards.
- The step surfaces comply to applicable sections of NFPA 1901 requirements.
- A safety sign FAMA25, which warns of the need for training prior to operating the apparatus, shall be located on the pump operator's panel.
- A rubber pump compartment seal provided between the rear of the pumphouse and the body.

13.04 Split-Shaft Mounted Pump

Split-Shaft Pumps utilize a split drive gear box to power the pump from the apparatus transmission. They have many features in common with PTO driven pumps.

- Split-Shaft mounted pumps are for stationary pumping only.
- Helical design and precision-cut gears to reduce noise and minimize wear.
- Double seal ring design solid bronze impeller
- Stainless-steel pump shaft
- Maintenance free mechanical seal
- The street and curb side pump panels and access doors are constructed entirely of aluminum and be covered with black protective material.
- The pump compartment has full width vertically hinged access doors located on the upper portion of the street and curb side pump compartment.
- A latch is furnished to hold the doors closed and have a retainer attached to prevent over extension of the opened door.
- The pump operator panels are to be completely "bolted" or hinged in place for ease of removal.
- A full panel width LED light hood is provided to illuminate the street and curb side pump panels. A service light is provided to illuminate the interior of the pump compartment. Lights are controlled by the operator's panel light switch.
- 2 1/2" 400# liquid filled stainless-steel individual discharge pressure gauges and control handles.
- One 3 1/2" Master discharge gauge and One 3 1/2" Master Pump intake gauge.
- Color-coded pump panel identification labels are provided for all gauges, controls, connections, switches, inlets, and outlets.
- Pump shift is electric operated and incorporates standard automotive shifting mechanism for ease of maintenance. The pump shift switch is mounted in the cab and identified as "Pump Engagement". The pump shift assembly includes an indicating light to show when the pump has been engaged.
- The apparatus will have a "Pump Engaged" and "OK to Pump" indicator in the driver compartment.
- A test plate shall be provided at the pump operator's panel that gives the rated discharges and pressures together with the speed of the engine as determined by the certification test for each unit, the position of the parallel/series pump as used, and the governed speed of the engine as stated by the engine manufacturer on a certified brake horsepower curve.
- The test label shall be completely stamped with all information at the factory and attached to the vehicle prior to shipping.

- Master pump manifold type drain valve are provided with all pump drains connected to it and operate from the pump operators panel, so the entire pump system may be drained by a single control.
- All discharges and pre-connects with a 1 ½" or larger valve, per NFPA 1901 standards, shall have drains or bleeder valves, having a minimum ¾" pipe thread connection, for bleeding off pressure from the hose connection to the outlet.
- 2 ½" auxiliary suction lines are gated with an Elkhart Unibody swing out quarter turn self-locking ball valve with chrome plated swivel adapter.
- Per NFPA 1901 standards there shall be pump system test ports mounted on the pump panel.
- The pump will have at minimum of two (2) sacrificial anodes included.

ENGINEERING NOTE FOR PUMP MODULES: ORDER PUMP MODULES WITH A CAP FLANGED IF THE PUMP HAS A REMOTE MOUNT CONTROLLER (FRONT SWEEPS, MONITOR, ETC.)

13.04.00 Auxiliary Air Tank

One (1) Auxiliary Air Tank for Pump Shift, attached to battery with Viair air compressor is wired to ignition w/ a breaker, onboard air hookup, and 2.5-gallon air tank. Installed inside pump house.

13.04.06 Hale DSD 1250 Split-Shaft Pump

All the plumbing and/or piping in the pump compartment will be constructed of 304 stainless-steel or flexible piping for long life. All NPT pipe thread connections larger than ¾" connections are avoided in the construction of the plumbing system. The following valves shall have groove connection: rear discharge, tank fill, all 2" and 2-½" pre-connect valves.

Pump Ratings:

1250 GPM @ 150 PSI

875 GPM @ 200 PSI

625 GPM @ 250 PSI

13.04.06.04 Hale DSD 1250 Split-Shaft Pump, Side Control, 24" Module

13.05 Primer Pump Option

13.05.02 Trident Primer Pump, Manual

The Trident Air Primer is a pneumatically operated, oil-less primer system. The priming system has a 3-barrel, bronze construction, has no moving parts, and is NFPA Compliant. It uses compressed air supplied from the chassis. Primer is actuated via push button. Extra engagement switches are actuated with an additional push button.

13.05.02.02 Primer to Pump

13.06 Suction Intakes

On all pumps, an intake suction relief shall be provided per NFPA 1901 standards. It will be terminated with a 2 ½" NST male adapter.

13.06.01 2 ½" Gated Intakes

Each intake consists of a 2 ½ " NST female chrome plated swivel intake located on the pump panel. The intake has a 2 ½ " valve, swivel adapter with screen, chrome plated plug and chain.

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13.06.01.01 One (1) intake, street side

13.06.02 Non-Gated Master Intakes

Master intakes are plumbed out both sides of the pump house and capped with a chrome long handled cap.

13.06.02.03 Two (2) 6" intakes

13.07 Discharges

Discharges include:

- Tee Handle Control
- 2 ½" 400 PSI Liquid Filled Stainless Pressure Gauge
- 30 Degree Elbow, cap and chain

13.07.01 Side Control Pump Panel Discharges

13.07.01.01 One (1) 2 ½" Discharge, Street

13.07.01.04 Two (2) 2 ½" Discharge, Curb Side

13.09 Tank Fill/ Tank to Pump

13.09.01 Tank Fill Valve 2"

A 2" tank fill/pump re-circulating line provided from the pump to the water tank, with a 2" valve and 2" high-pressure flexible hose.

13.09.01.01 2" Tank Fill Valve, Side Control

13.09.03 Tank to Pump 3"

A 3" tank to pump line provided from the water tank to the pump, with a 3" valve and tee handle controls, and 4" plumbing with flexible connection with check valve.

13.09.03.01 Manual Controls, Side Control

SECTION 14: HOSE TRAYS, PRE-CONNECTS AND CROSS LAYS

14.08 Hose Cross Lay

- Must select two (2) 1 ½" cross lays.
- Must select one (1) cross lay divider.
- Must select cross lay aluminum cover.

- The hose cross lay provides an area for pre-connected hose cross lays and/or hose storage.
- The cross lay is constructed of a 1" thick polypropylene/polyethylene floor designed to provide drainage and ventilation to the cross lay area.
- Front and rear are constructed of 1/8" aluminum.

14.08.01 Hose cross lay above Side Control Pump

14.09 Pre-connected Cross Lays

- Cross lay is pre-connected via NST swivel male gated with a ball valve.

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- Pre-connect has a 2 ½ " 400psi liquid filled stainless-steel individual pressure gauge and control handle. All cross lay pre-connects are foam capable (if equipped) except for LRR.
14.09.02 Two (2) 1 ½ " NST male pre-connects, 2" valve

14.10 Cross Lay Options

14.10.01 Cross Lay Divider

Hose cross lay is equipped with adjustable divider constructed of 3/16" aluminum.

14.10.01.01 One (1) Cross Lay Divider

14.10.05 Cross Lay Aluminum Cover, Single Hinge

Full aluminum cover with a single hinge. The hinge will be on top of the tubing at the front of the cross lay area directly behind the chassis cab. Equipped with rubber bumpers, lid latches, 2" webbing with flip top buckles on each side.

14.11 Hose Bed

14.11.00 Hose Bed

Hose bed runs the full length and width of the tank. The floor of the hose bed is grooved to allow the loaded hose to drain and provide ventilation. The floor is fabricated from UV stable white polypropylene with inverted T slot are machined into the floor at three points to accommodate adjustable hose dividers.

14.11.00.05 18" Tall Hose Bed Walls

14.11.02 Hose Bed cover

Heavy-duty vinyl hose bed cover is attached across the front of the hose bed with a rail and bead system to prevent wind from getting under the cover, with a flap to cover the back of the hose bed and has a quick release elastic rope to retain the hose in the bed during travel as required by NFPA.

14.11.02.12 Black Hose Bed Cover for Mini Pumper

SECTION 17: CHASSIS ACCESSORIES

17.00 Wheel simulators

Phoenix stainless steel wheel simulators are installed on front and rear wheels.

17.01 Shoreline Connection, Kussmaul "Auto Charge 1000"

One (1) 115 Volt Kussmaul "Auto Charge 1000" battery charger system installed.

17.01.02 Shoreline electrical auto eject plug-in, top, front corner of street side wheel well.

17.02 Tire Pressure Indicators

17.02.01 Tire Pressure Indicators

Tire pressure indicators installed to allow for inspection of pressure at the tire.

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17.03 SCBA Seating

17.03.00 SCBA Seats

SCBA Seats in the chassis cab installed for use with SCBA Brackets.

- 17.03.00.02 One (1) Front Passenger Seat, OEM Installed. (SCBA Bracket Ready)
- 17.03.00.05 Two (2) Rear Seats, OEM Installed. (Left and Right Seat SCBA Bracket Ready)

17.04 Receiver Hitch, Winches, & Bumpers

17.04.01 Rear Receiver Hitch

Class III 2" receiver hitch tube installed on the rear of the apparatus and furnished with a 7-pin electrical receptacle and safety chain rings. Both sides of the receiver hitch will have tow-eyes cut into the plates.

17.06 Chassis Exhaust

17.06.01 Standard Chassis Exhaust Modifications

Chassis exhaust is modified to exit passenger side behind the rear wheels and to the edge of the body.

17.06.02 DEF Tank Modifications

- Must select with Mini Pumper

The DEF tank will need to be relocated due to the chassis body.

SECTION 18: LOOSE EQUIPMENT

Loose equipment required by NFPA not listed will be supplied by customer after delivery of the apparatus prior to being put in service.

18.08 Wheel Chocks

- 18.08.03 Two (2) Rubber Wheel Chocks, connected by rope, in spare compartment.

SECTION 19: CHASSIS

19.00 Midwest Fire supplied chassis per specification attached. Brief summary below:

Chassis Summary			
Manufacturer	Ford	Cab Type (Reg, Ext, Crew)	Crew
Model	F550 4x4	Cab to Axle (in.)	84"
Engine Manufacturer	Ford	Wheelbase (in.)	203"
Engine Model	6.7L Diesel	Front Axle Rating (Lbs.)	7,500 lbs.
Horsepower	330	Rear Axle Rating (Lbs.)	14,706 lbs.
Transmission Make	Torque Shift	Paint Color Code	Race Red
Transmission Model	10-Speed Automatic	Two-Tone Scheme	TBD, Blue over Red
LED Headlights	No	Electric Locks	Yes
Electric Windows	Yes		

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SECTION 30: RESTRICTIONS

30.01 Maximum Height

30.01.01 No Restrictions

30.02 Maximum Length

30.02.01 No Restrictions

FINAL INSPECTION

The department will take physical possession of the truck and will receive all training on the operation of the truck at the Midwest Fire facility in Luverne, Minnesota during the final inspection/ delivery day.

DELIVERY

Transportation of the apparatus post final inspection is the responsibility of the department.

2023 Model Year Ford Warranty Guide

(Except F-600/F-650/F-750/F-53/F-59
Over 19,500 lbs. GVWR and Electric Vehicles)



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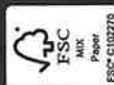


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This booklet explains the New Vehicle Limited Warranty coverages that apply to your Ford vehicle. Your satisfaction is our goal. If you are not satisfied with Ford's performance under the warranty, Ford participates in an informal warranty dispute settlement mechanism through the Better Business Bureau, which you can contact as follows: BBB AUTOLINE
1676 International Drive, Suite 550, McLean, VA 22102.

You may use the BBB Autoline without charge. An application is available from BBB (800-955-5100) or Ford (800-392-3673).

You must resort to the BBB Autoline mechanism before exercising rights or seeking remedies created by the Magnuson-Moss Warranty Act. If you choose to seek redress by pursuing rights and remedies not created by the Magnuson-Moss Warranty Act, resort to the BBB Autoline Mechanism is not required by any provision of the Magnuson-Moss Warranty Act. Your state may require that you first resort to the BBB Autoline before exercising rights or seeking remedies created by your state's laws.

Further information on the BBB Autoline can be found on page 47.

ALL IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED, TO THE EXTENT ALLOWED BY LAW, TO THE DURATION OF THE NEW VEHICLE LIMITED WARRANTY BUMPER TO BUMPER COVERAGE. Further information on implied warranties can be found on page 5.

ANY PUNITIVE, EXEMPLARY, INCIDENTAL, CONSEQUENTIAL OR ANY OTHER DAMAGES CAUSED BY DELAY, OR LOSS OF USE MAY NOT BE RECOVERED AND ARE DISCLAIMED AND EXCLUDED UNLESS APPLICABLE LAW PROHIBITS THEIR DISCLAIMER OR EXCLUSION. Further information on the disclaimers and exclusions can be found on page 5.



Your satisfaction is our #1 goal. If you have any questions or concerns, or are unsatisfied with the service you are receiving, follow these steps:

1. Contact your Sales Representative or Service Advisor at your selling/servicing dealership.
2. If your inquiry or concern remains unresolved, contact the Sales Manager, Service Manager or Customer Relations Manager.
3. If you require assistance or clarification on Ford Motor Company policies or procedures, please contact the Ford Customer Relationship Center.

In the United States:	In Canada:
Ford Motor Company Customer Relationship Center P.O. Box 6248 Dearborn, MI 48121 1-800-392-3673 (FORD) For the hearing- or speech-impaired: Please contact the Telecommunication Relay Service by dialing 711 www.owner.ford.com	Customer Relationship Centre Ford Motor Company of Canada, Limited P.O. Box 2000 Oakville, Ontario L6J 5E4 1-800-565-3673 (FORD) For the hearing- or speech-impaired: Please contact the Telecommunication Relay Service by dialing 711 M-F 8:30 AM - 8:00 PM (ET) www.ford.ca
In Asia-Pacific Region, Sub-Saharan Africa, U.S. Virgin Islands, Central America, the Caribbean, and Israel:	In Puerto Rico:
Ford Motor Company Ford Export Operations Attention: Customer Relations 1555 Fairlane Drive Fairlane Business Park #3 Allen Park, MI 48101 Telephone: (313) 594-4857 For customers in Guam, the Commonwealth of the Northern Mariana Islands (CNMI), America Samoa, and the U.S. Virgin Islands, please feel free to call our Toll-Free Number: (800) 841-FORD (3673) Fax: (313) 390-0804 E-mail: expcac@ford.com	Ford International Business Development, Inc. P.O. Box 11957 Caparra Heights Station San Juan, PR 00922-1957 Telephone: (800) 841-FORD (3673) Fax: (313) 390-0804 E-mail: prcac@ford.com www.ford.com.pr
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1. Introduction

Ford Motor Company and your selling dealer thank you for selecting one of our quality products. Our commitment to you and your vehicle begins with quality protection and service.

When you need warranty repairs, your selling dealer would like you to return to it for that service, but you may also take your vehicle to another Ford Motor Company dealership authorized for warranty repairs. Certain warranty repairs require special training though, so not all dealers are authorized to perform all warranty repairs. That means that, depending on the warranty repair needed, the vehicle may need to be taken to another dealer. If a particular dealership cannot assist you, then contact the Customer Relationship Center at 1-800-392-3673.

This booklet explains in detail the warranty coverages that apply to your 2023-model car or light truck. If you bought a previously owned 2023-model vehicle, you are eligible for any remaining warranty coverages.

Ford Motor Company provides the **Emissions Defect Warranties** and **Emissions Performance Warranties** which cover your emissions control systems, and **Noise Emissions Warranty** which applies only to medium/heavy duty trucks over 10,000 pounds Gross Vehicle Weight Rating (pages 22-45).

2. Important information you should know

IF YOU NEED CUSTOMER ASSISTANCE

Your Ford Motor Company dealer is available to assist you with all your automotive needs. Please follow the procedures outlined on the front page of this booklet.

In addition, if you are an eligible U.S. owner, you may use - at no cost - the services of the BBB AUTO LINE program. For details, see Better Business Bureau (BBB) AUTO LINE program, page 47 or call 1-800-955-5100.

KNOW WHEN YOUR WARRANTY BEGINS

Your **Warranty Start Date** is the day you take delivery of your new vehicle or the day it is first put into service (for example, as a dealer demonstrator), whichever occurs first.

CHECK YOUR VEHICLE

We try to check vehicles carefully at the assembly plant and the dealership, and we usually correct any damage to paint, sheet metal, upholstery, or other appearance items. But occasionally something may slip past us, and a customer may find that a vehicle was damaged before he or she took delivery. If you see any damage when you receive your vehicle, notify your dealership within one week.

MAINTAIN YOUR VEHICLE PROPERLY

Your glove compartment contains an **Owner's Manual** which indicates the scheduled maintenance required for your vehicle. Proper maintenance guards against major repair expenses resulting from neglect or inadequate maintenance, may help increase the value you receive when you sell or trade your vehicle, and is important in allowing your vehicle to comply with applicable emissions standards.

It is your responsibility to make sure that all of the scheduled maintenance is performed and that the materials used meet Ford engineering specifications. Failure to perform scheduled maintenance as specified in the Owner's Manual will invalidate warranty coverage on parts affected by the lack of maintenance. Make sure that receipts for completed maintenance work are retained with the vehicle.

Your Ford or Lincoln dealership, or Ford or Lincoln Quality Care Service Center, has factory-trained technicians who can perform the required maintenance using genuine Ford parts. The dealership looks forward to meeting your every service need to maximize your satisfaction with your vehicle.

WHO PAYS FOR WARRANTY REPAIRS?

You will not be charged for repairs covered by any applicable warranty during the stated coverage periods, unless specifically stated elsewhere in this guide.

Some states have mandated alternate time coverage periods for parts of your vehicle (e.g. seatbelts).

Some states and/or local governments may require a tax on a portion of warranty repairs. Where applicable law allows, the tax must be paid by you, the owner of the vehicle.

During the Bumper to Bumper Warranty period, dealers may receive instructions to provide no-cost, service-type improvements - not originally included in your Owner's Manual - intended to increase your overall satisfaction with your vehicle.

Sometimes Ford may offer a special adjustment program to pay all or part of the cost of certain repairs beyond the terms of the applicable warranty. Check with your dealer or call 1-800-392-3673 to learn whether any adjustment program is applicable to your vehicle. Please have your vehicle identification number available.

DO WARRANTIES APPLY IN OTHER COUNTRIES?

The **New Vehicle Limited Warranty** and the **Emissions Warranties** described in this booklet apply to your vehicle if:

- it was originally purchased through the Ford Export Operations Military Sales Program; or
- it was originally sold or leased by Ford Motor Company or one of its dealers in the United States or U.S. Territories, and it was originally registered/licensed and operated in the United States, U.S. Territories, or Canada.

If you meet either of these two requirements, you do have warranty coverage when you travel with this vehicle outside the United States, U.S. Territories, or Canada. In some cases, however, you may have to pay the servicing Ford dealer in a foreign country or U.S. Territory for a repair that is covered under the U.S. warranty. If this happens, be sure to save the paid repair order or invoice. You should present this document to a U.S. Ford Motor Company dealer for warranty refund consideration. Refer to www.Ford.com for additional customer assistance reference information.

3. The New Vehicle Limited Warranty for your 2023-model vehicle

LIMITATIONS AND DISCLAIMERS

All of the warranties in this booklet are subject to the following limitations and disclaimers:

The warranties in this booklet are the only express warranties applicable to your vehicle. Ford does not assume or authorize anyone to assume for it any other obligation or liability in connection with your vehicle or these warranties. No person, including Ford employees or dealers, may modify or waive any part of these warranties.

Ford and its dealers reserve the right to make changes in or additions to vehicles built or sold by them at any time without incurring any obligation to make the same or similar changes or additions to vehicles previously built or sold.

Ford and its dealers also reserve the right to provide post-warranty repairs, conduct recalls, or extend the warranty coverage period for certain vehicles or vehicle populations, at the sole discretion of Ford. The fact that Ford has provided such measures to a particular vehicle or vehicle population in no way obligates Ford to provide similar accommodations to other owners of similar vehicles.

As a condition of these warranties, you are responsible for properly using, maintaining, and caring for your vehicle as outlined in your Owner's Manual. Ford recommends that you maintain copies of all maintenance records and receipts for review by Ford.

Ford and your dealer are not responsible for any time or income that you lose, any inconvenience you might be caused, the loss of your transportation or use of your vehicle, the cost of rental vehicles, fuel, telephone, travel, meals, or lodging, the loss of personal or commercial property, the loss of revenue, or for any other incidental or consequential damages you may have.

Punitive, exemplary, or multiple damages may not be recovered unless applicable law prohibits their disclaimer.

You may not bring any warranty-related claim as a class representative, a private attorney general, a member of a class of claimants or in any other representative capacity.

Ford shall not be liable for any damages caused by delay in delivery or furnishing of any products and/or services.

You may have some implied warranties. For example, you may have an implied warranty of merchantability (that the car or light truck is reasonably fit for the general purpose for which it was sold) or an implied warranty of fitness for a particular purpose (that the car or light truck is suitable for your special purposes), if a special purpose was specifically disclosed to Ford itself not merely to the dealer before your purchase, and Ford itself not just the dealer told you the vehicle would be suitable for that purpose.

These implied warranties are limited, to the extent allowed by law, to the time period covered by the written warranties, or to the applicable time period provided by state law, whichever period is shorter.

**DISCLAIMER OF IMPLIED WARRANTIES FOR BUSINESS
AND RACING USE**

****** Ford disclaims all implied warranties if the vehicle is used for business or commercial purposes. ******

****** Ford disclaims the implied warranty of fitness for a particular purpose if your vehicle is used for racing, even if the vehicle is equipped for racing. ******

The warranties contained in this booklet and all questions regarding their enforceability and interpretation are governed by the law of the state in which you purchased your Ford vehicle. Some states do not allow Ford to limit how long an implied warranty lasts or to exclude or limit incidental or consequential damages, so the limitation and exclusions described above may not apply to you.

**APPLICABILITY OF LIMITATIONS OF IMPLIED WARRANTY TO
NEW VEHICLE LIMITED WARRANTY AND EMISSIONS
WARRANTY**

****** This information about the limitation of implied warranties and the exclusion of incidental and consequential damages under the NEW VEHICLE LIMITED WARRANTY also applies to the EMISSIONS WARRANTIES described on pages 22-45. ******

Ford participates in the BBB AUTO LINE warranty dispute resolution program. You may contact BBB AUTO LINE by calling 800-955-5100.

You are required to submit your warranty dispute to the BBB AUTO LINE before exercising rights or seeking remedies under the Federal Magnuson-Moss Warranty Act, 15 U.S.C. § 2301 et seq. To the extent permitted by the applicable state "Lemon Law", you are also required to submit your warranty dispute to the BBB AUTO LINE before exercising any rights or seeking remedies under the "Lemon Law".

If you choose to seek remedies that are not created by the Magnuson-Moss Warranty Act or the applicable state "Lemon Law," you are not required to first use BBB AUTO LINE to resolve your dispute – although the program is still available to you.

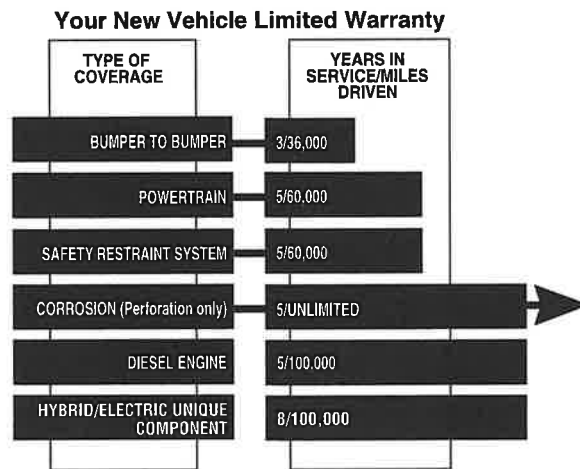
For more information regarding the BBB AUTO LINE program, see page 47 of this booklet.

QUICK REFERENCE: WARRANTY COVERAGE

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

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

- years in service
- miles driven



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

For more details on coverage, see:

- **What is Covered?** (pages 9-14)
- **What is Not Covered?** (pages 14-19)

WHAT IS COVERED?

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

- your Ford vehicle is properly operated and maintained, and
- was taken to a Ford dealership for a warranted repair during the warranty period,

then authorized Ford Motor Company dealers will, without charge, repair, replace, or adjust all parts on your vehicle that malfunction or fail during normal use during the applicable coverage period due to a manufacturing defect in factory-supplied materials or factory workmanship.

This warranty does not mean that each Ford vehicle is defect free. Defects may be unintentionally introduced into vehicles during the design and manufacturing processes and such defects could result in the need for repairs. Ford provides the New Vehicle Limited Warranty only to remedy manufacturing defects that result in vehicle part malfunction or failure during the warranty period.

The remedy under this written warranty, and any implied warranty, is limited to repair, replacement, or adjustment of defective parts. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Ford, through its authorized dealers, is willing and able to repair, replace, or adjust defective parts in the prescribed manner. Ford's liability, if any, shall in no event exceed the cost of correcting manufacturing defects as herein provided and upon expiration of this warranty, any such liability shall terminate.

Conditions that are not covered by the New Vehicle Limited Warranty are described on pages 14-19. When making warranty repairs on your vehicle, the dealer will use Ford or Motorcraft parts or remanufactured or other parts that are authorized by Ford, at the discretion of Ford or the Ford dealership.

Nothing in this warranty should be construed as requiring defective parts to be replaced with parts of a different type or design than the original part, so long as the vehicle functions properly with the replacement part. Moreover, Ford and its authorized dealers are entitled to a reasonable time and a reasonable number of attempts within which to diagnose and repair any defect covered by this warranty.

In certain instances, Ford may authorize repairs at other than Ford dealer facilities.

Two separate warranties apply to tires on your new vehicle. The New Vehicle Limited Warranty covers tire defects in factory supplied material or workmanship for 100% of labor costs and on a pro rata adjustment basis for parts. (See the reimbursement schedule below).

For vehicles within the New Vehicle Limited Warranty time in service and mileage coverage period, defective tires will be replaced on a pro rata adjustment basis according to the following mileage-based Reimbursement Schedule:

MILES DRIVEN	PERCENT OF PARTS COVERED BY FORD
1-12,000	100%
12,001-24,000	60%
24,001-36,000	30%

The tire manufacturer also provides you with a separate tire warranty that may extend beyond the New Vehicle Limited Warranty coverage. You will find the manufacturer's tire warranty with the owner literature supplied with your vehicle. You have the option of having a tire warranty repair performed by the tire manufacturer's authorized service center. If you go to a tire service center for a repair covered by the New Vehicle Limited Warranty, you may be charged a prorated amount for wear or other charges. If so, you should present your paid invoice detailing the nature of the charges to any Ford Motor Company dealership for refund consideration. When making warranty repairs on your vehicle, the dealer will use Ford or Motorcraft parts or remanufactured or other parts that are authorized by Ford. In certain instances, Ford may authorize repairs at other

than Ford dealer facilities. Tire replacements under warranty will be made with the same brand and model as originally equipped with the vehicle unless the same brand and model is no longer available, in which case a tire of the same brand, size, load, speed and tread type will be used. In some circumstances, Ford may authorize another brand and/or model to substitute for the original brand and model, even if still available.

Normal tire wear or damage is not reimbursable. See page 18 for details of what is not covered.

Extended warranty coverage periods are available for certain vehicle parts and conditions. Specifically,

(1) Your vehicle's Powertrain components are covered for five years or 60,000 miles, whichever occurs first. The extended coverage applies to the **Engine:** all internal lubricated parts, cylinder block, cylinder heads, electrical fuel pump, powertrain control module, engine mounts, flywheel, injection pump, manifold (exhaust and intake), manifold bolts, oil pan, oil pump, seals and gaskets, engine thermostat, engine thermostat housing, timing chain cover, timing chain (gears or belt), turbocharger/supercharger unit, valve covers, water pump; **Transmission:** all internal parts, clutch cover, seals and gaskets, torque converter, transfer case (including all internal parts), transmission case, transmission mounts (front and rear); **Front-Wheel Drive:** axle shafts, support bracket, front bearings, seals and gaskets, universal and constant velocity joints; **Rear-Wheel Drive:** axle shafts, rear bearings, center support bearing, drive axle housing (including all internal parts), drive shaft, retainers, supports, seals and gaskets, universal and constant velocity joints. **Four-Wheel/All-Wheel Drive:** axle shafts, support bracket, bearings (front and rear), center support bearing, drive shafts, final drive housing (including all internal parts), hubs-automatic front locking (four-wheel drive), locking rings (four-wheel drive), seals and gaskets, universal and constant velocity joints.

(2) Your vehicle's safety belts and air bag Supplemental Restraint System (SRS) are covered for an extended Safety Restraint Coverage Period, which lasts for five years or 60,000 miles, whichever occurs first.

(3) Your vehicle's body sheet metal panels are covered for an extended Corrosion Coverage Period, which lasts for five years, regardless of miles driven. The extended warranty coverage only applies if a body sheet metal panel becomes perforated due to corrosion during normal use due to a manufacturing defect in factory-supplied materials or factory workmanship. If aluminum body panels have corrosion or rust damage, and the damage is not the result of abnormal usage, vehicle accident, customer actions and/or extreme environmental conditions, the corrosion or rust damage repairs are covered for 5 years, unlimited miles. For damage caused by airborne material (environmental fallout) where there is no factory-related defect involved and therefore no warranty – our policy is to provide free repair of paint damage due to the airborne material for 12 months or 12,000 miles, whichever occurs first.

(4) Your vehicle's direct injection diesel engine and certain engine components are covered during the Diesel Engine Coverage Period, which lasts for five years or 100,000 miles, whichever occurs first. The following parts are covered during this extended coverage period: the engine, cylinder block, heads and all internal parts, intake and exhaust manifolds, timing gear, harmonic balancer, valve covers, oil pan and pump, water pump, fuel system (excluding fuel lines, fuel tank and frame mounted fuel conditioning module sometimes referred to as the frame mounted pump/filter/water separator or frame mounted fuel filter/water separator), high pressure lines, gaskets and seals, glow plugs, turbocharger, two-stage turbocharger assembly, turbocharger actuator, powertrain control module, high pressure fuel injection pump assembly, injectors, injection pressure sensor, fuel rail pressure sensor, exhaust back pressure regulator and sensor, exhaust pressure sensor, manifold pressure sensor, intake air temperature sensor, crankshaft position sensor, camshaft position sensor, accelerator switch.

(5) The electrical drivetrain system of your vehicle is covered by the Hybrid & Electric Vehicle Unique Component coverage for eight years or 100,000 miles, whichever comes first. The components in the electrical drivetrain system of your vehicle will vary, depending on whether your vehicle is a hybrid, plug-in hybrid, but you can rest assured knowing that your vehicle's electrical drivetrain system is covered by this comprehensive warranty. Depending on your vehicle, electrical drivetrain system components covered by this warranty may include, and are not limited to: high-voltage battery, high-voltage battery connector, battery energy control module (BECM), on-board charger, inverter system controller (ISC), DC/DC converter, hybrid continuously variable transmission or electric driveline motor and transmission range sensor. If an electrical drivetrain system component requires replacement under warranty, it may be replaced with a new, factory remanufactured, or factory refurbished component, at Ford's discretion. Refurbished battery components selected for your vehicle will align with your vehicle's age and mileage, and meet Ford's stringent requirements and standards. (see "Note: High-Voltage Battery Gradual Capacity Loss" below).

Note: High Voltage Battery Gradual Capacity Loss

The high voltage battery will experience gradual capacity loss with time and use, similar to all batteries, which is considered normal wear and tear. Loss of battery capacity due to or resulting from gradual capacity loss is NOT covered under the New Vehicle Limited Warranty. See your Owner's Manual for important tips on how to maximize the life and capacity of the high voltage battery.

NOTE: Some components may also be covered by the Emissions Warranties. For more information, see pages 22-45.

If you own or lease a 2023-model Next Generation Police Interceptor Vehicle (NGPI), refer to the Warranty Addendum Card that was given to you when you took delivery of your vehicle for further explanation of Amendments to the New Vehicle Limited Warranty. The Warranty Addendum applies only the NGPI vehicles delivered in the State of Florida and New York.

(6) Certain Commercial customers with a Valid Fleet Identification Number (FIN Code) are eligible for a five year / 100,00 mile limited powertrain warranty extension on the following vehicles: F-150 (Excluding Raptor), Super Duty (F-250 through F600) pickup, chassis cabs (F53/F59), Transit, Transit Connect and E-Series. Vehicle must be reported as a sales type "fleet" at original time of sale. To become a U.S. Ford Fleet Account, for vehicles which are owned and operated in the United States, you must register for a U.S. Fleet Identification Number (FIN Code). You will also be asked to provide proof of eligibility documentation for the vehicles in your fleet. To see if you qualify, please see the eligibility restrictions at www.fleet.ford.com/get-started. This warranty 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.

Ford Power-Up software updates

During the warranty coverage period, Ford Motor Company warrants that:

- you will not be charged for diagnosis, repair, replacement, or adjustment of components that are damaged or inoperable due to a defect caused by a Ford Power-Up software update

WHAT IS NOT COVERED UNDER THE NEW VEHICLE LIMITED WARRANTY?

Damage Caused By:

- accidents, collision or objects striking the vehicle (including driving through a car wash)
- theft, vandalism, or riot
- fire or explosion
- using contaminated or improper fuel/fluids
- customer-applied chemicals or accidental spills
- driving through water deep enough to cause water to be ingested into any component. i.e. powertrain components
- misuse of the vehicle, such as driving over curbs, overloading, racing or using the vehicle as a permanent stationary power source

(Plug-In Vehicles only) - The New Vehicle Limited Warranty does not cover: damage to the 120V convenience cord caused by misuse of the cord. Always use the convenience cord in a manner that conforms to the directions found in the Owner's Manual.

Damage Caused by Alteration or Modification

The New Vehicle Limited Warranty does not cover any damage caused by:

- alterations or modifications of the vehicle, including the body, chassis, electronics or their components, after the vehicle leaves the control of Ford Motor Company
- tampering with the vehicle, tampering with the emissions systems or with the other parts that affect these systems (for example, but not limited to exhaust and intake systems)
- the installation or use of a non-Ford Motor Company part or software (other than a certified emissions part or software) or any part or software (Ford or non-Ford) designed for off-road use only installed after the vehicle leaves the control of Ford Motor Company if the installed part fails or causes a Ford part to fail. Examples include, but are not limited to lift kits, oversized tires, roll bars, cellular phones, alarm systems, automatic starting systems and performance-enhancing powertrain components or software and performance "chips". Your vehicle may allow, enable or facilitate the use of certain non-Ford Motor Company software. Ford is not responsible for the functionality of such software. Ford may disallow, discontinue or modify your ability to use such software at any time without prior notification or incurring any warranty or other obligation. Non-Ford Motor Company software may be governed by End User License Agreement or warranty provided by the software provider. For Ford Motor Company software see End User License Agreement found in the Owner Manual.

Damage Caused by Use and/or the Environment

The New Vehicle Limited Warranty does not cover surface rust, deterioration and damage of paint, trim, upholstery, and other appearance items that result from use and/or exposure to the elements. You, as the owner, are responsible for these items. Some examples are:

- dings, dents
- cuts, burns, punctures or tears
- road salt
- tree sap, bird and bee droppings
- windstorm, lightening, hail
- earthquake
- freezing, water or flood
- stone chips, scratches (some examples are on paint and glass)
- windshield stress cracks. However, limited coverage on windshield stress cracks will be provided for the first 12 months or 12,000 miles (whichever occurs first), even though caused by use and/or exposure to the elements.

Maintenance/Wear

The New Vehicle Limited Warranty does not cover: (1) parts and labor needed to maintain the vehicle; and (2) the replacement of parts due to normal wear and tear. You, as the owner, are responsible for these items. See your Owner's Manual. Some examples of maintenance and normal wear are:

- oil changes
- oils, lubricants, other fluids
- oil/air filters
- tire rotation/inflation
- cleaning/polishing
- clutch linings
- wiper blades*
- wheel alignments and tire balancing*
- brake pad/lining*

* Ford will replace or adjust certain maintenance items when necessary, free of charge during a limited period:

- Wiper blade replacements will be provided during the first six months in service, regardless of miles driven.

- Wheel alignments and tire balancing will be provided during the first 12 months or 12,000 miles in service, whichever occurs first.
- Brake pad/lining replacements will be provided during the first 12 months or 18,000 miles in service, whichever occurs first.

SYNC Hands-Free Communications and Entertainment System

If your vehicle is equipped with SYNC, the New Vehicle Limited Warranty does not cover repairs under certain conditions, such as failure to provide proper installation environment. The New Vehicle Limited Warranty does not cover repairs for certain damage or loss, such as:

- Loss of personal recording media, software or data
- Loss, change, or discontinuation of functionality because of:
 - system updates to Ford Motor Company software or lack of compatibility with non-Ford Motor Company electronic devices
 - non-Ford Motor Company software, or
 - obsolescence of vehicle software or hardware
 - lack of network coverage or availability
- Damage caused by:
 - abnormal use such as insertion of foreign objects, fluid spillage
 - unauthorized modification to alter functionality or capability
 - computer or internet viruses, bugs, or malware, such as worms, Trojan Horses, cancelbots
 - installation of unauthorized software, peripherals and attachments
 - unauthorized, unapproved and/or incompatible repairs, upgrades and modification
 - the defective function or obsolescence of your cellular phone or digital media device (for example, inadequate signal reception by the external antenna, viruses or other software problems)

Tire Wear or Damage

The New Vehicle Limited Warranty does not cover normal wear or worn out tires. Tires will not be replaced (unless required by a warranty repair) for wear or damage including:

- tire damage from road hazard such as cuts, snags, bruises, bulges, puncture, and impact breaks
- tire damage due to under or over inflation, tire chain use, racing, spinning (as when stuck in snow or mud), improper mounting or dismounting, or tire repair

Other Items or Conditions Not Covered

The New Vehicle Limited Warranty does not cover:

- vehicles that have had the odometer disconnected, altered, or inoperative for an extended period of time with the result that the actual mileage cannot be determined
- vehicles that have ever been labeled or branded as dismantled, fire, flood, junk, rebuilt, reconstructed, or salvaged; this will void the New Vehicle Limited Warranty
- vehicles that have been determined to be a total loss by an insurance company; this will void the New Vehicle Limited Warranty
- converted ambulances that are not equipped with the Ford Ambulance Prep Package, see important information about ambulance conversions (page 50)
- aftermarket parts or components, sometimes installed by Ford Motor Company or an authorized Ford dealership, may not be covered by the New Vehicle Limited Warranty. Any damage caused to Ford components due to the failure of aftermarket parts (other than a certified emissions part) is not covered.
- high-voltage battery replacement due to improper vehicle storage. Refer to the Owner's Manual for the proper ways your vehicle's battery must be maintained in the event the vehicle is not driven or is stored for an extended period of time.

- The Lithium-ion battery (EV battery) will experience gradual capacity loss with time and use (similar to all lithium-ion batteries), which is considered normal wear and tear. Loss of battery capacity due to or resulting from gradual capacity loss is NOT covered under the New Vehicle Limited Warranty. See your Owner's Manual for important tips on how to maximize the life and capacity of the Lithium-ion battery.
- if the component that caused the failure is beyond coverage and damages a component with remaining coverage, the entire repair is NOT reimbursable.

4. In addition ...

ROADSIDE SERVICE ASSISTANCE (UNITED STATES, PUERTO RICO, AND U.S. VIRGIN ISLANDS)

Your vehicle is covered by the complimentary Ford Roadside Assistance Program (unless you are driving a daily rental unit). Under this program, Ford will cover:

- Towing to the nearest Ford Motor Company dealership, or towing to your selling dealership if within 35 miles of the disablement
- Flat tire change (vehicle must have useable spare)
- Fuel delivery (limited to two occurrences in a 12-month period up to 2 gal. gas, 5 gal. diesel)
- 12V Battery jump starts
- Lock-out assistance (replacement key cost is customer responsibility)
- Winch out services: includes pulling a vehicle within 100 feet of a paved or county maintained road. No recoveries.

The Roadside Assistance Program is separate from the New Vehicle Limited Warranty. It begins at the warranty start date and lasts for five years or 60,000 miles (whichever occurs first). If you need towing beyond the five years or 60,000 miles (whichever occurs first) period, Ford can arrange roadside assistance and charge your credit card. If the reason for the vehicle disablement is later found to be covered by a Ford or Lincoln Protect extended service plan, you may seek reimbursement for a tow charge under that plan.

For emergency roadside assistance, call 1-800-241-3673, 24 hours a day, 365 days a year.

Ford Rent-A-Car (FRAC) and Dealer Daily Rental (DDR) vehicles that must be towed because a covered repair failed during the warranty coverage period, Ford will cover towing to the nearest Ford Motor Company dealership.

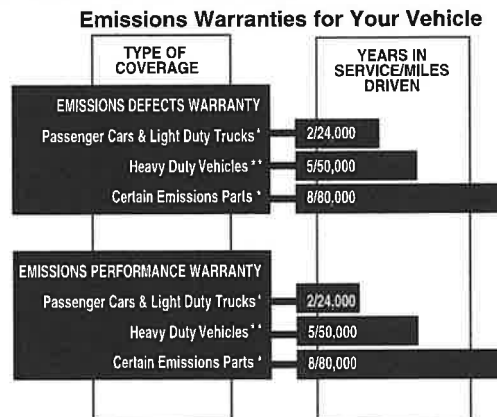
Ford Motor Company reserves the right to modify or discontinue Roadside Assistance at any time. Certain restrictions apply to Roadside Assistance benefits. Call 1-800-241-3673 for further details.

5. Federal requirements for emissions warranties

QUICK REFERENCE: EMISSIONS WARRANTY COVERAGE

This chart shows your warranty coverage under two emissions warranties that Ford Motor Company provides, in compliance with Federal requirements. The warranties are:

- Emissions Defects Warranty
- Emissions Performance Warranty



* Applies to vehicles up through 8,500 pounds gross vehicle weight rating (GVWR)

** Applies to trucks over 8,500 pounds GVWR up through 19,500 pounds GVWR. Vocational vehicle tires covered for 2/24,000 for defects that affect compliance with greenhouse gas requirements.

For full details on emissions control coverage, see:

- **Emissions Defect Warranty** (pages 23-24)
- **Emissions Performance Warranty** (pages 24-25)
- **What is Covered?** (pages 26-28)
- **What is Not Covered?** (page 28)

NOTE: Fully-electric vehicles are not eligible for any emissions warranties described in this booklet.

EMISSIONS DEFECT WARRANTY COVERAGE

During the warranty coverage period, Ford Motor Company warrants that:

- your vehicle or engine is designed, built, and equipped to meet - at the time it is sold - the emissions regulations of the U.S. Environmental Protection Agency (EPA).
- your vehicle or engine is free from emission-related defects in factory-supplied materials or workmanship, which are defects that could prevent the vehicle or engine from conforming with applicable EPA regulations.
- you will not be charged for diagnosis, repair, replacement, or adjustment of parts containing an emissions-related defect. A list of emission-related parts can be found in **What is Covered?** on pages 26-28.

The warranty coverage period for:

- The emissions defects warranty coverage period for passenger cars and light duty trucks (applies to vehicles up through 8,500 pounds GVWR) is as follows:
 - 8 years or 80,000 miles (whichever occurs first) for catalytic converters, electronic emissions control unit, and onboard emissions diagnostic devices, including the battery energy control module (BECM), and emission-related reprogramming of modules.
 - 2 years or 24,000 miles (whichever occurs first) for all other covered parts. (Note: Ford's 3-year, 36,000-mile bumper-to-bumper coverage, as described above, surpasses this mandatory federal coverage.)

- Heavy duty vehicles (applies to trucks over 8,500 pounds GVWR up through 19,500 pounds GVWR)
 - The emissions warranty coverage period for heavy duty vehicles (HDVs) is 5 years or 50,000 miles (whichever comes first) for all parts covered by your emissions warranty. The 5 year or 50,000 mile warranty includes coverage of components whose failure would increase the vehicle's emissions of air conditioning refrigerants.
 - **Only for HDVs designated as "vocational vehicles" on the underhood "VEHICLE EMISSION CONTROL INFORMATION" label:** Tire defects that affect compliance with greenhouse gas requirements are covered for 2 years or 24,000 miles, whichever comes first.

EMISSIONS PERFORMANCE WARRANTY COVERAGE

Under Emissions Performance Warranty Coverage, Ford Motor Company will repair, replace, or adjust - with no charge for labor, diagnosis, or parts - any emissions control device or system, if you meet all of the following conditions:

- You have maintained and operated your vehicle according to the instructions on proper care in the **Owner's Manual** and this booklet.
- Your vehicle fails to conform, during the warranty coverage period, to the applicable national EPA standards, as determined by an EPA approved inspection and maintenance program.
- You are subject to a penalty or sanction under local, state, or federal law because your vehicle has failed to conform to the emissions standards. (A penalty or sanction can include being denied the right to use your vehicle.)
- Your vehicle has not been tampered with, misused, or abused.

The warranty coverage period for:

- Passenger cars and light duty trucks (applies to vehicles up through 8,500 pounds GVWR) is as follows:
 - 8 years or 80,000 miles (whichever occurs first) for catalytic converters, electronic emissions control unit, and onboard emissions diagnostic devices, including the battery energy control module (BECM), and emission-related reprogramming of modules.
 - 2 years or 24,000 miles (whichever occurs first) for all other covered parts .
- Heavy duty vehicles (applies to trucks over 8,500 pounds GVWR up through 19,500 pounds GVWR)
 - 5 years or 50,000 miles (whichever occurs first) for all covered parts.

See **WHAT IS COVERED?** below for list of covered parts.

Note that the warranty period begins on the **Warranty Start Date** as specified on page 2 of this booklet.

WHAT IS COVERED?

If the parts on the following list contain an emissions-related defect, they are covered by the Defects Warranties.

- Aftertreatment Sensors
- Air Flow Sensor
- Air/Fuel Feedback Control System and Sensors
- Air Induction System
- Anti-lock Brake System Module (Hybrid and Plug-in Hybrid vehicles only except Explorer hybrid)
- Battery Energy Control Module (BECM)
- Belt Integrated Starter Generator (Hybrid and Plug-in Hybrid vehicles only)
- Brake Hydraulic/Electric Control Assembly (Plug-in Hybrid vehicles only)
- Brake Vacuum Pump (Plug-in Hybrid vehicles only)
- Catalytic Converters (including Selective Catalytic Reduction and Diesel Oxidation Catalysts)
- Charger and Bracket Assembly High Voltage Battery (Hybrid and Plug-in Hybrid vehicles only)
- Cold Start Enrichment System (diesel only)
- Controls for Deceleration (diesel only)
- Converter and Bracket Assembly High Voltage to Low Voltage (Hybrid and Plug-in Hybrid vehicles only)
- Diesel Exhaust Fluid System
- Diesel Particulate Filter
- Electronic Ignition System (diesel only)
- Electronic Engine Control Sensors and Switches
- Powertrain Control Module (PCM)/ Engine Control Module (ECM)*
- Evaporative Emission Control System
- Exhaust Gas Recirculation (EGR) System
- Exhaust Manifold
- Exhaust Pipe (Manifold to Catalyst)
- Fuel Filler Door Sensor (Hybrid and Plug-in Hybrid vehicles only)
- Fuel Filler Tube and Seal (non-diesel only)
- Fuel Injection System
- Fuel Injector Supply Manifold
- Fuel Tank (non-diesel only)
- Fuel Tank Pressure Control valve

- Glow Plugs (diesel only)
- High Voltage Battery (Hybrid and Plug-in Hybrid vehicles only)
- HVAC Controller (Plug-in Hybrid vehicles only)
- Ignition Coil and/or Control Module
- Intake Manifold
- Intercooler Assembly - Engine Charger
- Inverter System Controller (Plug-in Hybrid vehicles only)
- Jumper Assembly Charge Inlet to Charger (Hybrid and Plug-in Hybrid vehicles only)
- Jumper Assembly DC/DC Converter to High Voltage Panel (Hybrid and Plug-in Hybrid vehicles only)
- Malfunction Indicator Lamp (MIL)/On-Board Diagnostic (OBD) System
- Module and Bracket Assembly Transmission Inverter Control (Hybrid and Plug-in Hybrid vehicles only)
- Motor Electronics Coolant Pump (Plug-in Hybrid vehicles only)
- PCV system and Oil Filler Cap
- Onboard Charger (Plug-in Hybrid vehicles only)
- Secondary Air Injection System
- Spark Control Components
- Spark Plugs and Ignition Wires
- Thermostat
- Throttle Body Assembly (MFI)
- Transmission Assembly (Plug-in Hybrid vehicles only)
- Transmission Auxiliary Oil Pump (Plug-in Hybrid vehicles only)
- Transmission Fluid Temperature Sensor (Plug-in Hybrid vehicles only)
- Transmission Control Module (TCM) and Solenoids
- Turbocharger Assembly
- Vacuum Distribution System

* Includes hardware and emissions related software changes only

Important Information About List of Parts

Also covered by the two emissions warranties are all emissions-related bulbs, hoses, clamps, brackets, tubes, gaskets, seals, belts, connectors, non-diesel fuel lines, sensors, and wiring harnesses that are used with components on the list of parts, above.

Concerning parts that should be replaced on a certain maintenance schedule: these parts remain under warranty until : (a) the first replacement time that is specified in your **Owner's Manual**; or (b) the time or mileage limits of the Federal Defect and Performance Warranties (whichever occurs first). Your Ford Motor Company dealer maintains a complete list of parts covered by the emissions performance warranty. For questions about emission-related parts, contact your dealer.

WHAT IS NOT COVERED?

Ford Motor Company may deny you emissions warranty coverage due to abuse, neglect, improper maintenance, or unapproved modifications.

If you need more information about getting service under the **Federal Emissions Performance Warranty**, or if you want to report what you believe to be violations of the terms of this warranty, you may contact:

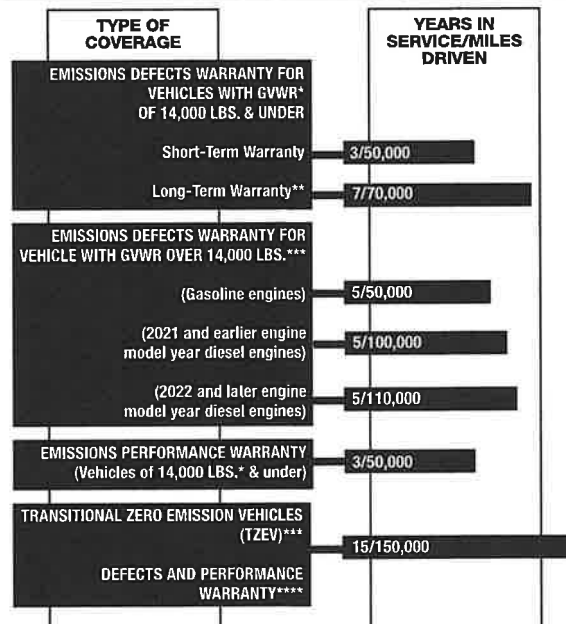
**U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Compliance Division, Light-Duty Vehicle Group
Attn: Warranty Complaints
2000 Traverwood Drive
Ann Arbor, MI 48105
Email: complianceinfo@epa.gov**

6. California requirements for emissions warranties

QUICK REFERENCE: EMISSIONS WARRANTY COVERAGE

This chart shows the emission warranty that Ford Motor Company provides for your vehicle under the emissions control warranty in accordance with the regulations of the California Air Resources Board. This coverage is in addition to Federal Emission warranties (Page 22).

Emissions Warranties for California Certified Vehicles



* Gross Vehicle Weight Rating

** These specific parts were selected on the basis of their estimated replacement cost at the time the California Air Resources Board certified your vehicle for sale in California (up through 14,000 pounds GVWR).

*** Refer to your Vehicle Emission Control Information and Important Engine Information (if applicable) label for emissions certification information.

**** Except for the high voltage battery, which is covered for 10 years or 150,000 miles (whichever occurs first).

NOTE: Fully-electric vehicles are not eligible for any emissions warranties described in this booklet.

Vehicles Eligible for California Emission Warranty Coverage

California emission warranty coverage applies if your vehicle meets the following two requirements:

- Your vehicle is registered in a state¹ that has adopted and is enforcing California emission warranty regulations applicable for your vehicle at the time of repair, and
- Your vehicle is certified for sale in California as indicated on the vehicle emission control information label.

¹ Subject to change, the following states have adopted and are enforcing California emission warranty regulations:

- **Passenger Car & Light-duty Trucks** (up through 8,500 pounds GVWR) - California, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington
- **Medium-Duty Passenger Vehicles** (up through 10,000 pounds GVWR designed primarily for the transportation of persons. Excludes incomplete trucks, trucks with a seating capacity either over twelve persons total or over nine persons rearward of the driver's seat, or trucks with an open cargo area of at least six feet of interior length): California, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New York, Oregon, Rhode Island, Vermont and Washington
- **Medium-Duty Vehicles** (over 8,500 pounds GVWR up through 14,000 pounds GVWR) - California, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New York, Oregon, Rhode Island, and Vermont.
- **Light Heavy-Duty Diesel Engine Vehicles** (over 14,000 pounds GVWR up through 19,500 pounds GVWR) - California, Maine and Pennsylvania.

Vehicles Eligible for California Transitional Zero Emission Vehicle (TZEV) Emission Warranty Coverage

California Transitional Zero Emissions Vehicle (TZEV) extended emission warranty coverage applies if your vehicle meets the following two requirements:

- Your vehicle is registered in a state** that has adopted and is enforcing California TZEV emissions warranty regulations applicable to your vehicle at the time of repair, and
- Your vehicle is certified as a TZEV in California as indicated on the vehicle emission control information label.

**Subject to change, the following states have adopted and are enforcing California TZEV emission warranty regulations: California, Colorado, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Rhode Island, and Vermont (NOTE: Delaware, Pennsylvania and Washington did not adopt the California TZEV emission warranty; standard California emission warranty coverage applies to all emission components. Oregon adopted high voltage battery TZEV warranty requirements only.)

For full details about coverage under California requirements for emissions control, see:

- **Defects Warranties** (pages 32-41)
- **Performance Warranty** (pages 32-35)
- **What Is Covered?** (pages 36-41)
- **What Is Not Covered?** (page 41)

EXPLANATION OF CALIFORNIA EMISSIONS WARRANTIES

CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT

Your Warranty Rights and Obligations

The California Air Resources Board and Ford Motor Company are pleased to explain the emission control system warranty on your 2023-model vehicle. In California, new motor vehicles must be designed, built, and equipped to meet the State's stringent anti-smog standards. Ford must warrant the emission control system on your vehicle for the periods of time listed on pages 32-35, provided there has been no abuse, neglect, or improper maintenance of your vehicle.

Your emission control system may include parts such as the fuel injection system, the ignition system, catalytic converter, and the engine computer. Also included may be hoses, belts, connectors, and other emissions-related assemblies.

Where a warrantable condition exists, Ford Motor Company will repair your vehicle at no cost to you including diagnosis, parts, and labor.

Manufacturer's Warranty Coverage

For Vehicles Eligible for California Emission Warranty Coverage

If Gross Vehicle Weight Rating is 14,000 lbs. or less:

For 3 years or 50,000 miles (whichever occurs first):

1. If your vehicle fails a Smog Check inspection, all necessary repairs and adjustments will be made by Ford to ensure that your vehicle passes the inspection. This is your emission control system PERFORMANCE WARRANTY.
2. If any emissions-related part on your vehicle is defective, the part will be repaired or replaced by Ford. This is your short-term emission control system DEFECTS WARRANTY.

For 7 years or 70,000 miles (whichever occurs first):

If an emissions-related part listed in this warranty booklet specially noted with coverage for 7 years or 70,000 miles is defective, the part will be repaired or replaced by Ford. This is your long-term emission control system DEFECTS WARRANTY.

For a list of the high-priced emission-related parts that are covered for 7 years or 70,000 miles, go to www.owner.ford.com/OwnerManuals.

Select the list that corresponds to the model and the model year of your vehicle. NOTE: This list is vehicle specific and may not be the same for all vehicles. It is based on the replacement cost of each specific part, which can vary between vehicle lines.

If Gross Vehicle Weight Rating is 8,501 lbs. through 14,000 lbs.:

- For 5 years or 50,000 miles (whichever occurs first) for components whose failure would increase the vehicle's emissions of air conditioning refrigerants.
- **Only for HDVs designated as "vocational vehicles" on the underhood "VEHICLE EMISSION CONTROL INFORMATION" label:** Tire defects that affect compliance with greenhouse gas requirements are covered for 2 years or 24,000 miles, whichever comes first.

If Gross Vehicle Weight Rating is over 14,000 lbs.:

For 5 years or 50,000 miles (gasoline engines), 5 years or 100,000 miles (2021 and earlier engine model year diesel engines), and 5 years or 110,000 miles (2022 and later engine model year diesel engines) (whichever occurs first). Warranty coverage of 5 years or 50,000 miles (whichever occurs first) applies for components whose failure would increase the vehicle's emissions of air conditioning refrigerants. **Only for HDVs designated as "vocational vehicles" on the underhood "VEHICLE EMISSION CONTROL INFORMATION" label:** Tire defects that affect compliance with greenhouse gas requirements are covered for 2 years or 24,000 miles, whichever comes first.

For Vehicles Eligible for California TZEV Emission Warranty Coverage

Except as noted below, for 15 years or 150,000 miles (whichever first occurs):

1. If your vehicle fails a Smog Check inspection, all necessary repairs and adjustments will be made by Ford to ensure that your vehicle passes the inspection. This is your emission control system PERFORMANCE WARRANTY.

2. If any emissions-related part on your vehicle is defective, the part will be repaired or replaced by Ford. This is your short-term emission control system DEFECTS WARRANTY.

NOTE: The TZEV warranty period for the high-voltage battery is 10 years or 150,000 miles (whichever first occurs).

Owner's Warranty Responsibilities

As the vehicle owner, you are responsible for the performance of the required maintenance listed in your owner's manual. Ford Motor Company recommends that you retain all receipts covering maintenance on your vehicle, but Ford cannot deny warranty coverage solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

You are responsible for presenting your vehicle to a Ford Motor Company dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

As the vehicle owner, you should also be aware that Ford Motor Company may deny you warranty coverage if your vehicle or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

If you have any questions regarding your warranty rights and responsibilities, or if you want to report what you believe to be violations of the terms of this warranty, you may contact the Ford Customer Relationship Center at 1-800-392-3673 (FORD) or the California Air Resources Board at:

**California Air Resources Board
9528 Telstar Avenue
El Monte, California 91731**

WHAT IS COVERED?

If the parts on the following list contain an emissions-related defect, they are covered by the Defects Warranties.

- Aftertreatment Sensors
- Air Flow Sensor
- Air/Fuel Feedback Control System and Sensors
- Air Induction System
- Anti-lock Brake System Module (Hybrid and Plug-in Hybrid vehicles only except Explorer hybrid)
- Battery Energy Control Module (BECM)
- Belt Integrated Starter Generator (Hybrid and Plug-in Hybrid vehicles only)
- Brake Hydraulic/Electric Control Assembly (Plug-in Hybrid vehicles only)
- Brake Vacuum Pump (Plug-in Hybrid vehicles only)
- Catalytic Converters (including Selective Catalytic Reduction and Diesel Oxidation Catalysts)
- Charger and Bracket Assembly High Voltage Battery (Hybrid and Plug-in Hybrid vehicles only)
- Cold Start Enrichment System (diesel only)
- Controls for Deceleration (diesel only)
- Converter and Bracket Assembly High Voltage to Low Voltage (Hybrid and Plug-in Hybrid vehicles only)
- Diesel Exhaust Fluid System
- Diesel Particulate Filter
- Electronic Ignition System (diesel only)
- Electronic Engine Control Sensors and Switches
- Powertrain Control Module (PCM)/Engine Control Module (ECM)*
- Evaporative Emission Control System
- Exhaust Gas Recirculation (EGR) System
- Exhaust Manifold
- Exhaust Pipe (Manifold to Catalyst)
- Fuel Filler Door Sensor (Hybrid and Plug-in Hybrid vehicles only)
- Fuel Filler Tube and Seal (non-diesel only)
- Fuel Injection System
- Fuel Injector Supply Manifold
- Fuel Tank (non-diesel only)
- Fuel Tank Pressure Control Valve

- Glow Plugs (diesel only)
- High Voltage Battery (Hybrid and Plug-in Hybrid vehicles only)
- HVAC Controller (Plug-in Hybrid vehicles only)
- Ignition Coil and/or Control Module
- Intake Manifold
- Intercooler Assembly - Engine Charger
- Inverter System Controller (Plug-in Hybrid vehicles only)
- Jumper Assembly Charge Inlet to Charger (Hybrid and Plug-in Hybrid vehicles only)
- Jumper Assembly DC/DC Converter to High Voltage Panel (Hybrid and Plug-in Hybrid vehicles only)
- Malfunction Indicator Lamp (MIL)/On-Board Diagnostic (OBD) System
- Module and Bracket Assembly Transmission Inverter Control (Hybrid and Plug-in Hybrid vehicles only)
- Motor Electronics Coolant Pump (Plug-in Hybrid vehicles only)
- PCV System and Oil Filler Cap
- Onboard Charger (Plug-in Hybrid vehicles only)
- Secondary Air Injection System
- Spark Control Components
- Spark Plugs and Ignition Wires
- Thermostat
- Throttle Body Assembly (MFI)
- Transmission Assembly (Plug-in Hybrid vehicles only)
- Transmission Auxiliary Oil Pump (Plug-in Hybrid vehicles only)
- Transmission Fluid Temperature Sensor (Plug-in Hybrid vehicles only)
- Transmission Control Module (TCM) and Solenoids
- Turbocharger Assembly
- Vacuum Distribution System

* Includes hardware and emissions related software changes only

COVERAGE FOR 2023 MODEL VEHICLES (GVWR OF 14,000 LBS. OR LESS) UNDER LONG TERM DEFECTS WARRANTY
 APPLICABLE ONLY TO CALIFORNIA-CERTIFIED VEHICLES REGISTERED IN A STATE THAT HAS ADOPTED AND IS ENFORCING CALIFORNIA EMISSION WARRANTY REGULATIONS
 (Coverage for up to 7 years/70,000 miles, whichever first occurs)

Part Number	1.5L Bronco Sport (3)	1.5L Escape (3)	2.0L Bronco Sport (3)	2.0L Edge (3)	2.0L Escape (3)	2.3L Explorer (3)	2.3L Ranger (3)	2.5L Hybrid Escape	2.5L Plug-in Hybrid Escape	2.7L Edge (3)	3.0L Explorer (3)	3.3L Explorer	3.3L Hybrid Explorer	3.5L Expedition (3)	3.5L Transit	3.5L Transit (3)
Instrument Cluster (2)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Battery Energy Control Module								X	X				X			
On-Board Battery Charger (1)									X							
High Voltage Traction Battery								X	X				X			
Battery Integrated Starter Generator													X			
CS Sensor Ring		X													X	X
Powertrain Control Wiring Harness (4)		X		X	X			X	X	X						
Sensor Coolant Temp				X	X					X	X					
Powertrain Control Module (PCM) / Engine Control Module	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knock Sensor (KS)				X		X				X	X					
Wire Assembly - Engine Control and Sensors (4)								X	X				X			
Dash Panel & Headlamp Junction Wiring (4)	X	X	X		X	X	X	X	X		X	X	X	X		
Interior Wiring Assembly (4)						X	X				X	X	X		X	X
Roof Wiring Harness (4)	X	X	X	X	X			X	X	X				X	X	X
Main Wiring Assembly (4)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rear Lamp Wiring Assembly (4)							X							X		
Fuel Sender Wiring Assembly (4)	X	X	X		X			X	X						X	X
Fuse Assembly (4)						X					X	X	X			
Main Body Wiring Harness (4)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HVEDS Charge Port Harness								X	X				X			
Main Jumper Wiring Assembly (4)	X	X	X		X	X		X	X	X	X	X	X	X	X	X
Molded Lead Frame Wiring Harness (4)	X		X	X						X					X	X
Transmission Harness Connector (4)				X						X						
DCDC Converter and Bracket Assembly								X	X				X			
ISC and Bracket Assembly								X	X				X			
Valve Assembly - Htr Wtr Control (4)								X	X				X			
Pump Assembly Htr (1)(4)									X							
A/C Compressor								X	X				X			
A/C Condenser								X	X				X			
Condenser to Evaporator Tube													X			
A/C Expansion Valve													X			
A/C Evaporator Assembly								X	X				X			
HVAC Controller (1)								X	X							
ABS Module								X	X							
ABS Electronic Control Module (4)								X	X							
Power Steering Wiring Assembly (4)														X		
Exhaust to Turbo Gasket														X		
Catalytic Converter	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Part Number	1.5L Bronco Sport (3)	1.5L Escape (3)	2.0L Bronco Sport (3)	2.0L Edge (3)	2.0L Escape (3)	2.3L Explorer (3)	2.3L Ranger (3)	2.5L Hybrid Escape	2.5L Plug-in Hybrid Escape	2.7L Edge (3)	3.0L Explorer (3)	3.3L Explorer	3.3L Hybrid Explorer	3.5L Expedition (3)	3.5L Transit	3.5L Transit (3)
Converter Heat Shield										X						
Catalytic Converter and Pipe															X	X
Exhaust Manifold & Catalyst Assembly		X			X			X	X							
Camshaft Timing Assembly	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Adjuster Assembly - Valve Lifter (4)			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Arm Assembly - Valve Rocker (4)	X	X		X	X					X	X					
Valve Rocker Cover Assembly (RH, LH)			X	X	X	X	X			X	X	X	X	X		
Oil Pump Assembly (4)	X							X	X	X	X	X	X	X	X	
Oil Filter Tube Assy (4)			X		X											
Crankshaft Position Sensor (CKP)															X	X
Variable Camshaft Timing Assembly	X	X	X	X	X	X	X			X	X	X	X	X	X	X
Duct, Charge Air Cooler Cold										X						
Duct, Charge Air Cooler Hot			X	X						X						
Charge Air Cool Tube Assembly Inlet										X						
Charge Air Cool Tube Assembly Outlet				X						X						
Cylinder Head Temperature Sensor						X				X	X					
Camcover Gasket			X	X	X	X	X			X	X	X	X	X		
Turbocharger	X	X	X	X	X	X	X			X	X					X
Charge Air Cooler	X	X	X		X	X					X			X		
Catalytic Converter Gasket					X											
Engine Variable Camshaft Timing Solenoid				X	X	X	X				X	X	X	X		
Hybrid Powertrain Control Module (1)									X							
Transmission/Diff Assembly (4)						X	X				X	X	X	X	X	X
Transmission Control Assembly (4)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Inverter System Controller (1) (4)									X							
Transmission Harness Connector (4)															X	
Transmission Torque Clutch Solenoid Assembly (4)	X	X	X	X	X			X	X	X						X
Transmission Internal MLF Wiring Harness (4)	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
Pressure Regulator Sensor	X	X	X	X	X			X	X	X						X
Transmission Solenoid Assembly	X	X	X	X	X			X	X	X						
Pressure Regulator Solenoid Assembly	X	X	X	X	X			X	X	X						X
Output Shaft Speed (OSS) Sensor	X	X	X	X	X			X	X	X						X
Transmission Fluid Temperature (TOT) Sensor	X	X	X	X	X			X	X	X						X
Transmission Range Sensor / Detent Assembly	X	X	X	X	X			X	X	X	X	X	X	X	X	X
Transmission Solenoid - 5R110W	X	X	X	X	X			X	X	X						X
Turbine/Input Shaft Speed (TSS) Sensor Assembly																X
Emotor Front Module													X			
Thermostat Assembly						X					X					
Fan Shroud Harness (4)				X						X						
Valve Assembly - Htr Wtr Control (1)(4)								X	X							
Fuel Tank	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fuel Tank Sender and Outlet Tube Assembly				X				X	X	X						

Part Number	1.5L Bronco Sport (3)	1.5L Escape (3)	2.0L Bronco Sport (3)	2.0L Edge (3)	2.0L Escape (3)	2.3L Explorer (3)	2.3L Ranger (3)	2.5L Hybrid Escape	2.5L Plug-in Hybrid Escape	2.7L Edge (3)	3.0L Explorer (3)	3.3L Explorer	3.3L Hybrid Explorer	3.5L Expedition (3)	3.5L Transit	3.5L Transit (3)
High Pressure Fuel Pump	X	X	X	X	X	X		X	X	X		X	X		X	X
Intake Manifold		X			X						X	X	X		X	X
Exhaust Manifold (Right Hand)												X	X	X	X	X
Exhaust Manifold (Left Hand)												X	X	X	X	X
Intake Manifold Gasket					X											
Intake Manifold Gasket LH		X														
Exhaust Manifold Gasket					X	X	X			X	X	X	X	X	X	X
Flat/Ring Exhaust Gasket		X			X					X				X	X	X
Fuel Tank Shield		X	X	X				X	X	X						
Fuel Injection Fuel Supply Manifold Assembly		X	X	X			X			X	X	X	X	X	X	X
Fuel Tube Return Line to Tank End		X	X	X				X	X	X						
EGR Valve Assembly														X		
Carbon Canister and Bracket Assembly				X						X					X	X
Rear Vapor Line Assembly Tank to Vapor Blocking Valve (VBV)						X					X	X	X			
EGR Outlet Pipe Gasket							X									
Inlet Tube (EGR)							X									
EGR Cooler and Bypass Valve						X	X									
EGR Tube to Manifold Connector												X	X	X	X	
Fuel Injector				X	X	X				X	X			X	X	X
Fuel Injector Fuel Supply Manifold												X	X	X	X	
Fuel Injector Charge Assembly			X	X			X			X	X	X	X	X	X	X
Injection Pressure Sensor										X	X	X	X			
Turbocharger			X	X	X	X	X									
Turbocharger Actuator Kit			X	X	X	X	X								X	
Direct Fuel Injector				X	X	X				X	X				X	X
Fuel Delivery Module		X	X	X	X			X	X	X	X	X	X	X	X	X
Fuel Tube Supply	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fuel Supply Line Tank to Bundle			X	X						X	X		X		X	X
Sensor to Rail Fuel Line	X		X	X						X	X	X		X		
Fuel Pump to Fuel Rail Tube				X						X	X	X	X	X	X	X
EGR Pressure Sensor						X				X						
Tank Assembly (without straps)				X			X			X				X		
Turbocharger Control Solenoid																X
Intake Manifold Lower												X	X		X	X
Exhaust/Emission Control Wire Assembly (4)															X	X
Exhaust to Turbo Gasket		X												X		X
Turbo Exhaust Adapter																X
Compressor Bypass Valve														X		
EGR Outlet Temperature Sensor						X										

(1) For Plug-In Hybrid Vehicles Only
(2) For Service Engine Soon/Malfunction Indicator Lamp (MIL) Functionality Concerns Only

(3) For EcoBoost/ Turbocharged Engine Only
(4) For MIL Illumination Only
(5) For Non-EcoBoost Engine Only

Important Information about List of Parts

There may be additional coverage for these parts through the Bumper to Bumper, Powertrain, or Diesel Engine limited warranties. In any case, the warranty with the broadest coverage applies.

Ford will cover damages to other vehicle components proximately caused by a failure under warranty of any warranted part.

Also covered by this warranty are all emissions-related bulbs, hoses, clamps, brackets, tubes, gaskets, seals, belts, connectors, non diesel fuel lines, and wiring harnesses that are used with components on the list of parts above.

Concerning parts that should be replaced on a certain maintenance schedule: these parts remain under warranty until the first required replacement time that is specified in your **Owner's Manual**.

NOTE: If the diagnosis does not reveal a defect, the Defects Warranty does not apply.

Your Ford Motor Company dealer maintains a complete list of covered parts. For more details about the specific parts that are covered by the Defects Warranty, contact your dealer.

WHAT IS NOT COVERED?

Ford Motor Company may deny you emissions warranty coverage due to abuse, neglect, improper maintenance, or unapproved modifications.

7. Additional information about your emissions warranty coverage, under Federal and California requirements

HOW DO I GET WARRANTY SERVICE?

To get service under your emissions warranties, take your vehicle to any Ford Motor Company dealer as soon as possible after illumination of the Malfunction Indicator Light or it has failed an EPA-approved test or a California Smog Check inspection. Be sure to show the dealer the document that says your vehicle has failed the test.

Your dealer will determine whether the repair is covered by the warranty. If the dealer has a question about Emissions Performance Warranty coverage, it will forward the question to Ford Motor Company, which must make a final decision within 30 days after you bring your vehicle in for repair. (The decision will be made within a shorter time if state, local, or federal law requires you to have the vehicle repaired more quickly in order to avoid additional penalties.) The deadline for a determination about Emissions Performance Warranty Coverage does not need to be met if you request a delay, agree to a delay in writing, or if the delay is caused by an event for which neither Ford nor your dealer is responsible. If a question about Emissions Performance Warranty coverage is referred to Ford Motor Company, you will be notified by Ford Motor Company in writing if your claim for warranty coverage is denied. The notice will explain the basis for denying your claim. If you fail to receive this notice within a timely manner, as determined above, Ford will perform the warranty repair for you free of charge.

HOW DO I HANDLE EMERGENCY REPAIRS?

If your vehicle needs an emergency warrantable repair and a Ford Motor Company dealer is not available, or if a Ford Motor Company dealer cannot perform warrantable repair(s) within 30 days of you bringing your vehicle to the dealer, repairs may be performed at any service establishment or by you using Ford equivalent replacement parts.

Ford will reimburse you for the cost of these warranty repairs including diagnosis, if you take the part(s) that are replaced and the repair receipt(s) to a Ford Motor Company dealer. The reimbursement shall not exceed Ford's suggested retail price for the warranted parts that are replaced and labor charges based on Ford's recommended time allowance for the warranty repair and the geographically appropriate hourly rate.

WHAT REPLACEMENT PARTS SHOULD I USE?

Ford Motor Company recommends that you use genuine Ford replacement parts. However, when you are having non-warranty work done on your vehicle, you may choose to use non-Ford parts. If you decide to use non-Ford parts, be sure they are equivalent to Ford parts in performance, quality, and durability. If you use replacement parts that are not equivalent to Ford parts, your vehicle's emissions control systems may not work as effectively, and you may jeopardize your emissions warranty coverage.

Under the Federal and California emissions warranties, Ford will repair or replace covered parts if they are properly installed Ford parts or the equivalent, or non-Ford parts that have been certified by the U.S. EPA or the California Air Resources Board (CARB). Ford is not responsible for the cost of repairing or replacing non-Ford parts that are not equivalent to Ford parts or that have not been certified by EPA or CARB.

The maintenance, replacement, or repair of emissions control devices or systems can be performed by any automotive repair establishment or individual using Ford replacement parts or the equivalent, or EPA- or CARB-certified parts, without voiding your emissions warranty coverage for future repairs during the applicable warranty period.

PROPER MAINTENANCE PRESERVES YOUR WARRANTY

If you do not maintain your vehicle properly, Ford may have the right to deny you warranty coverage.

To have repairs made under this warranty, you may have to show that you have followed Ford's instructions on properly maintaining and using your vehicle. You will find these instructions in your **Owner's Manual**. Be sure to save your service receipts and to keep accurate records of all maintenance work.

CUSTOMER ASSISTANCE

If you are not satisfied with the handling of a warranty matter, see **Customer Assistance**, on the inside front cover, and **Better Business Bureau (BBB) AUTO LINE program**, page 47.

8. Noise emissions warranty

NOISE EMISSIONS WARRANTY FOR CERTAIN LIGHT TRUCKS

Ford Motor Company warrants to the first person who purchases this vehicle for purposes other than resale and to each subsequent purchaser that this vehicle as manufactured by Ford, was designed, built and equipped to conform at the time it left Ford's control with all applicable U.S. EPA Noise Control Regulations.

This warranty covers this vehicle as designed, built and equipped by Ford Motor Company, and is not limited to any particular part, component or system of the vehicle as manufactured by Ford. Defects in design, assembly or in any part, component or system of the vehicle as manufactured by Ford, which, at the time it left Ford's control, caused noise emissions to exceed Federal standards, are covered by this warranty for the life of the vehicle.

THE NOISE EMISSIONS WARRANTY OBLIGATIONS DO NOT APPLY TO:

- loss of time, inconvenience, loss of use of the vehicle, commercial loss or other consequential damages.
- any vehicle which is not covered by the U.S. EPA Medium and Heavy Trucks Noise Emission Standards (40 C.F.R. Part 205, Subpart B). Among the non-covered vehicles are those lacking a partially or fully enclosed operator's compartment, such as a basic stripped chassis, those having a Gross Vehicle Weight Rating of 10,000 pounds or less, and those sold outside the United States and its territories. To the extent permitted by law, THIS WARRANTY IS EXPRESSLY INSTEAD of any express or implied warranty, condition, or guarantee, agreement, or representation, by any person with respect to conformity of this vehicle with the U.S. EPA Noise Control Regulations, including ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS.

9. Ford Protect Extended Service Plan

MORE PROTECTION FOR YOUR VEHICLE

You can get more protection for your new car or light truck by purchasing a Ford Protect. Ford Protect service contracts are backed by Ford Motor Company or Ford Motor Service Company. Ford Protect plans provide up to 8 years and 150,000 miles of coverage.

They provide:

- benefits during the warranty period, depending on the plan you purchase can be: reimbursement for a rental vehicle, protecting against tire and wheel road hazard damage, coverage for certain maintenance and wear items, lost key replacement, other plans are available;
- protection against covered repair costs and continuing Roadside Service Assistance benefits after your Bumper to Bumper Warranty expires.

You may purchase Ford Protect from any Ford Motor Company dealer or see our website at fordprotect.ford.com. There are several Ford Protect plans available in various time, distance and deductible combinations. Each plan is tailored to fit your own driving and vehicle ownership needs, including reimbursement for towing and rental.

When you purchase Ford Protect, you receive peace-of-mind protection throughout the United States, Canada and Mexico, provided by a network of more than 3,200 Ford Motor Company dealers.

NOTE: Repairs performed outside the United States, Canada, Mexico, Guam or Puerto Rico, Virgin Islands, American Samoa and District of Columbia are not eligible for Ford Protect coverage.

This information is subject to change. Ask your dealer for complete details about Ford Protect coverage.

10. The Better Business Bureau (BBB) AUTO LINE Program (U.S. Only)

Your satisfaction is important to Ford Motor Company and to your dealer. If a warranty concern has not been resolved using the three-step procedure outlined on the first page of the Customer Assistance section, you may be eligible to participate in the BBB AUTO LINE program.

The BBB AUTO LINE program consists of two parts — mediation and arbitration. During mediation, a representative of the BBB will contact both you and Ford Motor Company to explore options for settlement of the claim. If an agreement is not reached during mediation and your claim is eligible, you may participate in the arbitration process. An arbitration hearing will be scheduled so that you can present your case in an informal setting before an impartial person. The arbitrator will consider the testimony provided and make a decision after the hearing.

You are not bound by the decision, but should you choose to accept the BBB AUTO LINE decision, Ford must abide by the accepted decision as well. Disputes submitted to the BBB AUTO LINE program are usually decided within forty days after you file your claim with the BBB.

BBB AUTO LINE Application: Using the information provided below, please call or write to request a program application. You will be asked for your name and address, general information about your new vehicle, information about your warranty concerns, and any steps you have already taken to try to resolve them. A Customer Claim Form will be mailed that will need to be completed, signed, and returned to the BBB along with proof of ownership. Upon request, the BBB will review the claim for eligibility under the Program Summary Guidelines.

You can get more information by calling BBB AUTO LINE at 1-800-955-5100, or writing to:

**BBB AUTO LINE
1676 International Drive, Suite 550
McLean, VA 22102**

BBB AUTO LINE applications can also be requested by calling the Ford Motor Company Customer Relationship Center at 1-800-392-3673.

Note: Ford Motor Company reserves the right to change eligibility limitations, modify procedures, or to discontinue this process at any time without notice and without obligation.

11. State warranty enforcement laws

These state laws - sometimes called "lemon laws" - allow owners to receive a replacement vehicle or a refund of the purchase price, under certain circumstances. The laws vary from state to state.

To the extent your state law allows, Ford Motor Company requires that you first send us a written notification of any defects or non-conformities that you have experienced with your vehicle. (This will give us the opportunity to make any needed repairs before you pursue the remedies provided by your state's law.)

In all other states where not specifically required by state law, Ford Motor Company requests that you give us the written notice. Send your written notification to:

**Ford Motor Company
Customer Relationship Center
P.O. Box 6248
Dearborn, MI 48126**

12. Important information about ambulance conversions

Ford vehicles are suitable for producing ambulances only if equipped with the **Ford Ambulance Prep Package**. In addition, Ford urges ambulance manufacturers to follow the recommendations of the **Ford Incomplete Vehicle Manual** and the **Ford Truck Body Builders Layout Book** (and pertinent supplements).

Using a Ford vehicle without the Ford Ambulance Prep Package to produce an ambulance could result in elevated underbody temperatures, fuel over pressurization, and the risk of fuel expulsion and fires. Such use also voids the Ford Bumper to Bumper Warranty and may void the Emissions Warranties.

You may determine whether the vehicle is equipped with the **Ford Ambulance Prep Package** by inspecting the information plate on the driver's rear door pillar.

You may determine whether the ambulance manufacturer has followed Ford's recommendations by contacting the ambulance manufacturer of your vehicle.



Hale Products Inc. • A Unit of IDEX Corporation
700 Spring Mill Avenue • Conshohocken, PA. 19428
Phone: 610-825-6300 • Fax: 610-825-6440
www.haleproducts.com

Hale Products Inc. Limited Standard Warranty (Fire Service Applications Only)*

EXPRESS WARRANTY: Hale Products, Incorporated (“Hale”) hereby warrants to the original buyer that products manufactured by Hale are free of defects in material and workmanship for a period of five (5) years from the date the product is first placed into service or five and one-half (5-1/2) years from date of shipment by Hale, whichever period shall be first to expire. Within this warranty period Hale will cover parts and labor for the first two (2) years and parts only for years three (3) through five (5).

LIMITATIONS: HALE’S obligation is expressly conditioned on the Product being:

- Subjected to normal use and service.
- Properly installed and maintained in accordance with HALE’S Instruction Manual and Industry Standards as to recommended service and procedures.
- Not damaged due to abuse, misuse, negligence or accidental causes.
- Not altered, modified, serviced (non-routine) or repaired other than by an Authorized Service facility.
- Manufactured per design and specifications submitted by the original buyer.
- Used with an appropriate engine as determined by the engine manufacturers published data.
- Excluded are normal wear items identified as but not limited to packing, strainers, anodes, filters, light bulbs, intake screens, wear rings, mechanical seals, etc.

THE ABOVE EXPRESS LIMITED WARRANTY IS EXCLUSIVE. NO OTHER EXPRESS WARRANTIES ARE MADE. SPECIFICALLY EXCLUDED ARE ANY IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATIONS, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE; COURSE OF DEALING; USAGE OF TRADE; OR PATENT INFRINGEMENT FOR A PRODUCT MANUFACTURED TO ORIGINAL BUYER’S DESIGN AND SPECIFICATIONS.

EXCLUSIVE REMEDIES: If Buyer promptly notifies HALE upon discovery of any such defect (within the Warranty Period), the following terms shall apply:

- Any notice to HALE must be in writing, identifying the Product (or component) claimed defective and circumstances surrounding its failure.
- HALE reserves the right to physically inspect the Product and require Buyer to return same to HALE’S plant or Authorized service Facility.
- In such event, Buyer must notify HALE for a Return Goods Authorization number and Buyer must return the Product F.O.B. within (30) days thereof.
- If determined defective, HALE shall, at its option, repair or replace the Product, or refund the purchase price (less allowance for depreciation).
- HALE’s reimbursement covers only the standard labor and Hale components required for the removal, repair, and/or re-installation of HALE supplied Product.
- HALE’s reimbursement does not cover the standard labor or components for the removal and reinstallation of non-HALE supplied components.
- Absent proper notice within the Warranty Period, HALE shall have no further liability or obligation to Buyer therefore.

THE REMEDIES PROVIDED ARE THE SOLE AND EXCLUSIVE REMEDIES AVAILABLE. IN NO EVENT SHALL HALE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, LOSS OF LIFE; PERSONAL INJURY; DAMAGE TO REAL OR PERSONAL PROPERTY DUE TO WATER OR FIRE; TRADE OR OTHER COMMERCIAL LOSSES ARISING, DIRECTLY OR INDIRECTLY OUT OF PRODUCT FAILURE.



* Portable and float pumps, non-fire service applications, skids and trailer products sold by Hale are not covered by this warranty document.



APR PLASTIC FABRICATING, INC.
2312 Cass St., Fort Wayne, IN 46808 | 260.482.8523 | aprfiretanks.com

Limited Lifetime Warranty – Fabricated Fire Vehicle Tanks and/or Bodies

APR Plastic Fabricating, Inc. , hereinafter referred to as **Seller**, warrants that these goods manufactured and sold by **Seller** will be free from defects in material and workmanship for a period of time equal to the service life of the original vehicle in which they were installed (**one year maximum outside North America**). For this warranty to have full effect, the vehicle must be in active service (for it's designed purpose) at the time any defect is discovered.

This warranty is transferable (subject to the approval of the **Seller**) within North America by written notification of **Seller** within thirty (30) days of vehicle transfer date.

Seller's obligation under this warranty is solely limited to repairing or replacing, at **Seller's** option, any part of the goods found to be defective within the warranty period. Reasonable costs to remove and reinstall defective product incurred by vehicle manufacturer, or its specific assigns, will be payable by **Seller**. Costs for travel outside North America will not be covered under this warranty.

This warranty is conditioned upon receipt by **Seller** of prompt notice of the claimed defect, including a description of the defect and of its discovery, substantiating photographs, and an opportunity made for **Seller** (or it's assigned agents) to inspect the goods in the buyer's or end user's facility. Notification must be made in writing or by calling Toll Free 1-800-352-8265. **Seller** will dispatch a repair technician within **48** hours of notification in the event the vehicle has been rendered out-of-service (**Response time only valid in North America**). **Seller** will send a repair technician to arrive at a mutually satisfactory time if the vehicle is still in service. Product must be identifiable by serial number for this warranty to be effective.

This warranty does not apply to goods damaged by misuse, neglect, accident, or physical damage to goods that have been improperly applied. This warranty does not apply to the costs of installation, reinstallation, normal operation, or normal maintenance of any warranted goods.

Installation or modification (subsequent to initial sale) performed by **Seller** will be covered under separate warranty.

Any alteration of warranted goods by persons other than **Seller**, or its specific assigns, will void warranty.

Seller makes no additional warranties, either express or implied, as to any of the goods sold and in particular Seller makes no other warranties of merchantability or fitness for any particular purpose.

In no event shall **Seller** be liable for failure of the goods to comply with any federal, state or local laws or for incidental or consequential damages including loss of profits, or any other type of damage which may be caused in whole or in part by any failure, defect or other problem of the goods sold by seller.

The above is intended to apply to product described in **Seller's** quote or purchase agreement number

QT/ Serial #: _____ DWG #: _____ PO #: _____
This Warranty Certificate is Valid only if signed by Seller's authorized representative.
Signed: *Phil Falls* Date: _____

Midwest Fire Service

We understand how important the issue of service is for you and your department. With hundreds of Midwest Fire apparatus in the field, we have over three decades of experience in providing ongoing support after delivery.

We make every effort to ensure that your new Midwest Fire apparatus leaves our manufacturing facility at 100% operating level – all chassis, apparatus, and sub-components included. Your apparatus was built with comprehensive quality control and inspected at multiple key points throughout the construction process and although we take these exhaustive steps to ensure quality and operational function, we understand that at times there's a need for service or repair of your apparatus.

Midwest Fire will work with your trusted local service center to perform the necessary repairs for your Midwest Fire truck. If you do not have a preferred service center, Midwest Fire can locate and contract with an appropriate service center to undertake the work required.

In the state of Texas, our franchised dealer Rescue Ops LLC is available to provide mobile service for all warranty and service required.

Because you are able to call us direct, your request for service will get immediate attention. Midwest Fire makes it a priority to support our customers after delivery of their apparatus. For all inquiries regarding service or warranty, please contact General Manager Brett Jensen for immediate assistance. Our facility is open Monday-Friday, 8 am-5 pm.

Midwest Fire Equipment & Repair Company
901 Commerce Road
PO Box 524
Luverne, MN 56156

Toll Free: 1.800.344.2059 Fax 1.507.283.9142 Info@MidwestFire.com

MidwestFire.com • 1.800.344.2059

info@MidwestFire.com • 901 Commerce Road • P.O. Box 524 • Luverne, MN 56156

WARRANTY POLICY OF MIDWEST FIRE

The information contained in this Warranty Policy explains the coverage for the apparatus provided by Midwest Fire Equipment & Repair Company, herein referred to as Midwest Fire. A copy of this policy should be kept on file with the delivery documents for the apparatus.



OBTAINING WARRANTY SERVICE

Contact Midwest Fire to arrange authorized service. All claims under this Limited Warranty, and prior to any work started, must be submitted in writing to Midwest Fire within the warranty period as stated herein. For questions regarding this Limited Warranty, contact Midwest Fire (1-800-344-2059.)

EFFECTIVE WITH VEHICLES BUILT JANUARY 1, 2010 OR LATER LIMITED WARRANTY FOR FIRE TRUCK MODELS OFFERED BY MIDWEST FIRE warrants to the original Purchaser that Midwest Fire apparatus and component parts thereof are, at the time of purchase, free from defects in material and workmanship and will remain free from such defects under normal use after delivery to the Purchaser as provided herein. Warranty shall begin at the time of delivery unless otherwise approved by Midwest Fire. The delivery limitations as set forth herein shall run from the date of delivery to the Purchaser in the United States of America and Canada.

BASIC VEHICLE COVERAGE

Basic Vehicle Warranty, Twelve (12) Months, Unlimited Mileage

The remedy available under this Limited Warranty is non-cumulative in nature and is limited to repair or replacement at a trusted service location or by the Purchaser upon agreement prior to service. Midwest Fire, at its option, will repair or replace any part of this vehicle which proves defective in material and/or workmanship in normal use and service, with new or rebuilt parts, for the first twelve (12) months from new vehicle delivery date. This warranty is not transferable except by prior written agreement with Midwest Fire. Exceptions are listed below under *What is Not Covered*.

BODY SUB-STRUCTURE – TWENTY-FIVE (25) YEARS, Unlimited Mileage

Midwest Fire warrants to the original purchaser only, that the sub-structure fabricated by Midwest Fire, under normal use and with reasonable maintenance, will be structurally sound and will remain free from defect in materials or workmanship or corrosion perforation for a period of twenty-five (25) years. Warranty does not apply to items covered by separate warranty included but not limited to: Hardware, moldings, and other accessories attached to the sub-structure. In addition, this warranty does not apply to sub-structures, or any part or accessory attached to this sub-structure, manufactured by an outside vendor.

METAL BODY WARRANTY – TEN (10) YEARS, Unlimited Mileage

Midwest Fire warrants to the original purchaser only, that a body fabricated by Midwest Fire, under normal use and with reasonable maintenance, will be structurally sound and will remain free from defect in materials or workmanship or corrosion perforation for a period of ten (10) years. Warranty does not apply to items covered by separate warranty included but not limited to: Hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to bodies, or any part or accessory attached to this body, manufactured by an outside vendor.

Midwest Fire will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery, not due to misuse, negligence, or accident.

The extent of warranty repair shall be determined solely by Midwest Fire, and shall be performed only at the factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be the responsibility of the purchaser. Midwest Fire will not be liable for consequential damages and under no circumstances will its liability exceed the price for a defective body or sub-structure. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Midwest Fire will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

PAINT WARRANTY - TEN (10) YEARS, Unlimited Mileage

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of ten (10) years beginning from the day the vehicle is delivered to the purchaser. The warranty as outlined on the guarantee certificate will provide coverage for the following paint failures:

Guarantee Inclusions:

Full apparatus body manufactured and painted by Midwest Fire:

1. Peeling or delaminating of the topcoat and/or other layers of paint.
2. Cracking or checking.
3. Loss of gloss caused by cracking, checking, or hazing.

COMPONENT COVERAGE

Parts, components, or accessories not manufactured by Midwest Fire described within are given warranty coverage of variable time periods. Parts, components, or accessories include, but not limited to; Chassis & chassis components, water tanks, pumps, electric and electronic equipment, valves, etc. Such components or accessories are covered by the respective warranties of the manufacturers thereof. These warranties may be, in some cases, less than twelve (12) months. The producers of these components or accessories or their local servicing agents should be contacted for prompt corrective warranty action.

WHAT IS NOT COVERED

- Vehicles sold and/or operated outside the United States and Canada.
- Vehicles/components which have had unauthorized alterations or modifications.
- Loss of time or use of the vehicle, inconvenience, or other consequential or incidental damages or expenses.
- Replacement of defective parts with parts other than those provided by Midwest Fire unless prior arrangements have been made between the Purchaser and Midwest Fire.
- *Chassis including but not limited to;* Frame side rails, Cab & Cowl structure with components, Diesel engines/electronics and attached accessories (e.g., fan clutch, alternator, starter, etc.), Front & rear axles and Prop-shaft, Transmission, Brakes, Tires, or any other component installed and present on the chassis when delivered to the Midwest Fire for final body assembly.

This warranty does not apply, or include coverage for defects attributable to damage resulting from the following:

- (i) misuse, abuse, accident, neglect, negligence, vandalism, fire, riot, war, or Acts of God;
- (ii) Structural or other modifications or alteration without prior express written authorization by Midwest Fire;
- (iii) Repair or attempt-ed repair by unauthorized persons;
- (iv) Replacement of original components with substitutes without prior express written authorization by Midwest Fire;
- (v) Failure to perform routine preventative maintenance as customarily accepted within the industry or failure to provide proof of such preventative maintenance having been performed;
- (vi) Exposure to corrosives, contaminants, chemicals, salt, irradiation or atmospheric or environmental conditions;
- (vii) Usage or loading in excess of recommended capacities or in non-standard applications, including off-road.
- (viii) Fading or discoloration of paint, lettering or decals; _____

DISCLAIMER

NO WARRANTIES ARE GIVEN BEYOND THOSE DESCRIBED HEREIN. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. THE COMPANY SPECIFICALLY DISCLAIMS WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OTHER REPRESENTATIONS TO THE USER/PURCHASER, AND ALL OTHER OBLIGATIONS OR LIABILITIES. THE COMPANY FURTHER EXCLUDES LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES, ON THE PART OF THE COMPANY OR SELLER. No person is authorized to give any other warranties or to assume any liabilities on the Company's behalf unless made or assumed in writing by the Company; and no other person is authorized to give any warranties or to assume any liabilities on the seller's behalf unless made or assumed in writing by the seller.

Any provisions of this Limited Warranty which is prohibited or not enforceable in any jurisdiction shall be, as to such jurisdiction, ineffective to the extent of such prohibition or non-enforceability without invalidating the remaining provisions hereof, and any such prohibition or non-enforceability in any jurisdiction shall not invalidate or render non-enforceable any such provisions in any other jurisdiction.

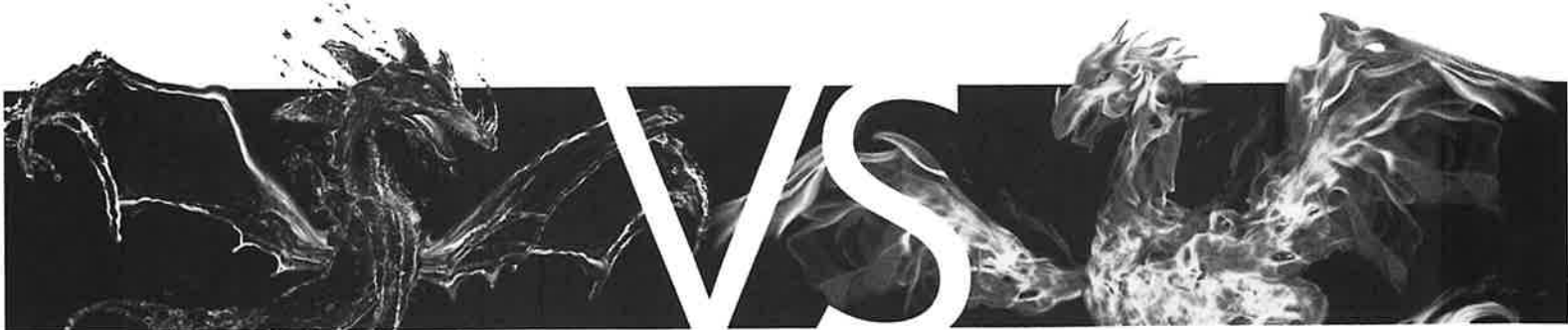


901 Commerce Road • P.O. Box 524 www.MidwestFire.com Luverne, MN 56156 • 1.800.344.2059

List of Warranties — All-Poly Series Tankers, Pumpers, Quick Attacks

- Freightliner (Basic Vehicle): 2 years / unlimited miles
 - Chassis Drivetrain: 2 years / unlimited miles
 - Chassis Frame Rails: 5 years / unlimited miles
 - Cummins Engine & Allison Transmission: 5 years / 100,000 miles
 - Cab and Chassis Electrical: 1 year / 100,000 miles
- Pump Hale: 5 years Darley: 10 years Waterous: 7 years
- Poly Tank: Lifetime
- Poly Body: Lifetime
- PPG Paint (Tank/Body): 10 years
- LED Lighting: 5 years
- Midwest Fire Plumbing workmanship: 10 years
- Midwest Fire Electrical workmanship: 10 years
- Midwest Fire Bumper to Bumper: 1 year
- Body Sub-Structure: 25 years

*All warranty certificates will be provided at time of delivery





901 Commerce Road • P.O. Box 524 www.MidwestFire.com Luverne, MN 56156 • 1.800.344.2059

December 27th, 2023

RE: CARB Regulations – Town of Dundee; Mini-Pumper

Dear Midwest Fire Customer,

The purpose of this document is to make you aware that the CARB compliant emission warranty covers certain engine, aftertreatment and chassis components that are critical to the emission system of the vehicle. A CARB compliant emission warranty code is required for CARB Compliance. Vehicles designated as non-CARB cannot be converted to CARB after the truck is manufactured.

Our original equipment manufacturer (OEM) chassis dealers have informed us that emergency vehicles are exempt and do not require CARB. Although emergency vehicles are believed to be exempt, certain states, counties or municipalities may still require your fire truck to be CARB compliant. Midwest Fire cannot and does not offer legal advice regarding CARB regulation requirements for your state, county, or municipality.

It is the responsibility of the fire department to inform Midwest Fire if your truck needs to be CARB compliant.

By signing this document, you are agreeing to a non-CARB compliant chassis.

As always, thank you for choosing Midwest Fire Equipment & Repair Company.

Respectfully,

Newt Johnson
Account Representative
Midwest Fire

Acknowledged by:

Joseph Carbone, Fire Chief
Town of Dundee Fire Department; Dundee, FL





901 Commerce Road • P.O. Box 524 www.MidwestFire.com Luverne, MN 56156 • 1.800.344.2059

LETTER OF UNDERSTANDING

This Letter of Understanding will memorialize the agreement between Midwest Fire Equipment & Repair Company (Midwest Fire) and the Town of Dundee. This document pertains to a fire apparatus to be manufactured by Midwest Fire, One (1) All-Poly Series Mini-Pumper.

Timing/Delivery of Truck Chassis:

- The Town of Dundee apparatus project will be added to the next available slot in the Midwest Fire production schedule (currently estimated to be in November of 2025).
- To maintain the typical production timeline, Midwest Fire requires that the truck chassis be onsite, at its Luverne, MN facility, not later than 8/01/25. If the truck chassis is not delivered by this date, Town of Dundee understands & acknowledges that Midwest Fire may reprice cost of the apparatus.

Midwest Fire will do everything possible to maintain the production schedule & pricing extended on this fire apparatus project. However, given the open-ended availability of truck chassis, Midwest Fire is unable to extend apparatus pricing beyond the dates detailed above.

ACKNOWLEDGED AND AGREED TO BY:

Midwest Fire Equipment and Repair Company

Town of Dundee

Dundee Fire Department

Sarah J. Atchison, Owner/President & CEO

Joseph Carbone, Fire Chief

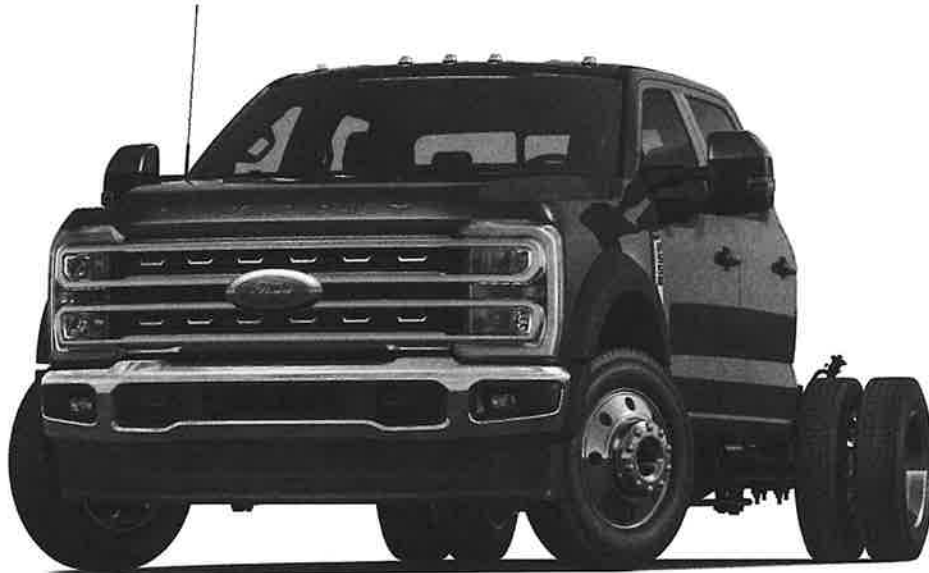
Date: _____

Date: _____

Prepared for: Newt Johnson, Midwest Fire Equipment and Repair

2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420



Client Proposal

Prepared by:
James Cantrell
Office: 601-825-2801
Date: 12/27/2023



Gray-Daniels Ford | 201 Octavia Drive, Brandon, Mississippi, 390422437
Office: 601-825-2801 | Fax: 601-591-2649

Prepared for: Newt Johnson

Midwest Fire Equipment and Repair

Prepared by: James Cantrell

12/27/2023

Gray-Daniels Ford | 201 Octavia Drive Brandon Mississippi | 390422437



2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420

As Configured Vehicle

Description

Base Vehicle Price (W5H)

Order Code 660A

Includes:

- *Transmission: TorqShift 10-Speed Automatic 10R140 with neutral idle. Includes SelectShift and selectable drive modes: normal, tow/haul, eco, slippery roads and off-road.*
- *Tires: 225/70Rx19.5G BSW A/P*
- *Wheels: 19.5" x 6" Argent Painted Steel Hub covers/center ornaments not included.*
- *Radio: AM/FM Stereo w/MP3 Player Includes 6 speakers.*
- *SYNC 4 Communications & Entertainment System Includes enhanced voice recognition, 911 Assist, 8" LCD center stack screen, AppLink, 1 smart-charging USB port and trailer brake controller.*

Engine: 6.7L 4V OHV Power Stroke V8 Turbo Diesel B20

Includes Operator Commanded Regeneration (OCR), Diesel Exhaust Fluid (DEF) tank, intelligent oil-life monitor and manual push-button engine-exhaust braking.

Includes:

- *Dual 68 AH/65 AGM Battery*

Transmission: TorqShift 10-Speed Automatic

10R140 with neutral idle. Includes SelectShift and selectable drive modes: normal, tow/haul, eco, slippery roads and off-road.

Limited Slip w/4.30 Axle Ratio

GVWR: 19,500 lb Payload Plus Upgrade Package

Includes upgraded frame, rear-axle and low deflection/high capacity rear springs. Increases max RGAWR to 14,706 lbs. Note: See Order Guide Supplemental Reference for further details on GVWR.

Tires: 225/70Rx19.5G BSW A/P

Wheels: 19.5" x 6" Argent Painted Steel

Hub covers/center ornaments not included.

Stainless Steel Wheel Covers (Pre-Installed)

Front and rear.

Vinyl 40/Mini-Console/40 Front Seat

Includes driver's side manual lumbar.

Monotone Paint Application

203" Wheelbase

Radio: AM/FM Stereo w/MP3 Player

Includes 6 speakers.

Includes:

- *SYNC 4 Communications & Entertainment 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.

Note: 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 for: Newt Johnson

Midwest Fire Equipment and Repair

Prepared by: James Cantrell

12/27/2023

Gray-Daniels Ford | 201 Octavia Drive Brandon Mississippi | 390422437



2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420

As Configured Vehicle (cont'd)

Description

Includes enhanced voice recognition, 911 Assist, 8" LCD center stack screen, AppLink, 1 smart-charging USB port and trailer brake controller.

Extra Heavy-Duty Front End Suspension - 7,500 GAWR

Includes upgraded front axle and max 7,500 lbs. Front springs/GAWR rating for configuration selected. Incomplete vehicle package - requires further manufacture and certification by a final stage manufacturer.

High Capacity Trailer Tow Package

Includes trailer brake wiring kit. Increases GCW from 32,500 lbs. to 40,000 lbs. Note: Salesperson's Portfolio or Trailer Towing Guide should be consulted for specific trailer towing or camper limits and corresponding required equipment, axle ratios and model availability. See Supplemental Reference for vehicle height consideration.

Engine Block Heater

Transfer Case Skid Plates

Dual 68 AH/65 AGM Battery

Platform Running Boards

Center High-Mounted Stop Lamp (CHMSL)

Fleet Customer Powertrain Limited Warranty

Requires valid FIN code.

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.

50-State Emissions System

Race Red

Medium Dark Slate w/Vinyl 40/Mini-Console/40 Front Seat

Bostrom Crew Seats

*One H.O. Bostrom SCBA Front Passenger Crew Seat
Two H.O. Bostrom SCBA Rear Passenger Crew Seats (Mounted in Outboard Positions)
Load and Lock Mounting Brackets with Safety Strap
Flip Up Padded Headrest
Waterproof Fabric Cushions
Certified to meet Federal FMVSS Requirements*

plus

One non-SCBA rear seat (Mounted in Center Position)

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.

Note: 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 for: Newt Johnson

Midwest Fire Equipment and Repair

Prepared by: James Cantrell

12/27/2023

Gray-Daniels Ford | 201 Octavia Drive Brandon Mississippi | 390422437



2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420

Selected Equip & Specs

Dimensions

• Conventional Capacity: 18,500 lbs. • **GCWR: 43,000 lbs.** • **Fifth-wheel towing capacity: 33,100 lbs.** • **Gooseneck towing capacity: 33,300 lbs.** • Vehicle body length: 289.2" • Vehicle body width: 80.0" • Vehicle body height: 81.7" • Wheelbase: 203.0" • Front track: 74.8" • Rear track: 74.0" • Vehicle turning radius: 28.6' • Cab to axle: 84.0" • Rear tire outside width: 93.9" • Axle to end of frame: 47.2" • Frame section modulus: 12.7 cu.in. • Frame yield strength (psi): 50000.0 • Frame rail width: 34.2" • Front bumper to front axle: 38.3" • Front bumper to back of cab: 158.1" • Front brake diameter: 15.4" • Rear brake diameter: 15.8" • Interior rear cargo volume with seats folded: 52.1 cu.ft. • Max interior rear cargo volume: 52.1 cu.ft. • Total passenger volume: 131.7 cu.ft. • Headroom first-row: 40.8" • Headroom second-row: 40.4" • Leg room first-row: 43.9" • Leg room second-row: 43.6" • Shoulder room first-row: 66.7" • Shoulder room second-row: 65.9" • Hip room first-row: 62.5" • Hip room second-row: 64.7"

Powertrain

* **Powerstroke 6.7L V-8 diesel direct injection, DEVCT intercooled turbo, diesel, engine with 330HP** • Engine cylinders: V-8 • **Compression ignition system** • **Horsepower: 330 HP@2200 RPM** • **Torque: 950 lb.-ft.@1800 RPM** • **Engine block heater** • Radiator • Auxiliary power take-off • **Engine retarder system** • 10-speed automatic • Part-time 4WD • Four-wheel drive • **Recommended fuel: diesel** • **Mechanical limited slip differential** • Driveline managed traction control • Auto locking hub control • Electronic transfer case shift

Fuel Economy and Emissions

* **Diesel secondary fuel type** • Federal emissions

Suspension and Handling

• Firm ride suspension • Heavy-duty front shock absorbers • Heavy-duty rear shock absorbers

Driveability

• 4-wheel disc brakes • Front and rear ventilated disc brakes • 4-wheel antilock (ABS) brakes • Four channel ABS brakes • Brake assist system • Hill Start Assist • Mono-beam rigid axle front suspension • Front anti-roll bar • Front coil springs • **Rigid axle rear suspension** • Leaf spring rear suspension • Rear anti-roll bar • Hydraulic power-assist steering system • Re-circulating ball steering • 2-wheel steering system

Body Exterior

• Trailer wiring harness • **Running boards** • 4 doors • Clearcoat paint • Monotone paint • Black fender flares • Black side window trim • Black windshield trim • Black door handles • Black front bumper • Black front bumper rub strip • 2 front tow hooks • Black grille • Black door mirrors • Manual extendable trailer mirrors • Convex spotter in driver and passenger side door mirrors • Turn signal indicator in door mirrors • Conventional left rear passenger door • Conventional right rear passenger door • LT225/70RS19.5 AS BSW front and rear tires • 19.5 x 6-inch front and dual rear argent steel wheels

Convenience

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Midwest Fire Equipment and Repair

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Gray-Daniels Ford | 201 Octavia Drive Brandon Mississippi | 390422437



2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420

Selected Equip & Specs (cont'd)

• Power door locks with 2 stage unlocking • Keyfob activated door locks • All-in-one remote fob and ignition key • Cruise control with steering wheel mounted controls • FordPass Connect smart device vehicle start control • Day/Night rearview mirror • Power first-row windows • **Partial floor console** • Fixed rear windshield • Illuminated locking glove box • Illuminated glove box • Front beverage holders • Rear beverage holders • 8 beverage holders • Instrument panel covered bin • Dashboard storage • Retained accessory power • PRND in IP • Trip computer • Upfitter switches • Over the air updates

Comfort

• Manual climate control • Cabin air filter • Rear under seat climate control ducts • Cloth headliner material • Full headliner coverage • Full vinyl floor covering • Full floor coverage • Vinyl rear seat upholstery • Carpet rear seatback upholstery • Manual tilting steering wheel • Manual telescopic steering wheel • Urethane steering wheel

Seats and Trim

* **Seating capacity: 5** • **Bucket front seats** • Driver seat with 4-way directional controls • Front passenger seat with 4-way directional controls • Height adjustable front seat head restraints • Manual front seat head restraint control • Manual reclining driver seat • Manual driver seat fore/aft control • Manual reclining passenger seat • Manual passenger seat fore/aft control • Fixed rear seats • Split-bench rear seat • Height adjustable rear seat head restraints • Manual driver seat lumbar • Vinyl front seat upholstery

Entertainment Features

• 2 total number of 1st row displays • 8 inch primary LCD display • Primary touchscreen display • AM/FM stereo radio • In-vehicle audio • AM radio • FM radio • Seek scan • SYNC 4 external memory control • Speakers number: 6 • Standard grade speakers • Steering wheel mounted audio controls • SYNC 4 voice activated audio controls • Speed sensitive volume • Wireless audio streaming • Fixed audio antenna

Lighting, Visibility and Instrumentation

• Digital/analog instrumentation display • Configurable instrumentation gauges • Trip odometer • In-radio display clock • Compass • Exterior temperature display • Driver information center • Gauge cluster display size (inches): 4.20 • Tachometer • Engine/electric motor temperature gauge • **Turbo/supercharger boost gauge** • Transmission fluid temperature gauge • Engine hour meter • **Diesel exhaust fluid (def) gauge** • Light tinted windows • Aero-composite headlights • Halogen headlights • Autolamp auto on/off headlight control • Multiple enclosed headlights • Delay-off headlights • DRL preference setting • Variable intermittent front windshield wipers • Front reading lights • Illuminated entry • Rear reading lights • Variable instrument panel light • Daytime running lights • Cab clearance lights • **High mounted center stop light** • Remote activated perimeter approach lighting • Fade interior courtesy lights

Technology and Telematics

• SYNC 4 911 Assist emergency SOS system via mobile device • SYNC 4 handsfree wireless device connectivity • AppLink/Apple CarPlay and Android Auto smart device wireless mirroring • FordPass Connect 5G mobile hotspot internet access • 2 USB ports

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**2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)**

Price Level: 420

Selected Equip & Specs (cont'd)**Safety and Security**

• Driver front impact airbag • Seat mounted side impact driver airbag • Safety Canopy System curtain first and second-row overhead airbags • Passenger front impact airbag • Seat mounted side impact front passenger airbag • 6 airbags • Front height adjustable seatbelts • SecuriLock immobilizer • Remote panic alarm • Lane Departure Warning • Pre-Collision Assist with Automatic Emergency Braking (AEB) forward collision mitigation • Manual rear child safety door locks

Dimensions*General Weights*

* Curb weight	8,312 lbs.	* Rear curb weight	3,334 lbs.
* GVWR	19,500 lbs.	* Payload	11,150 lbs.

Trailer Weights

* Fifth-wheel towing capacity	33,100 lbs.	* Gooseneck towing capacity	33,300 lbs.
Conventional capacity	18,500 lbs.	* GCWR	43,000 lbs.

Front Weights

* Front curb weight	4,978 lbs.	* GAWR front	7,500 lbs.
* Axle capacity front	7,500 lbs.	* Spring rating front	7,500 lbs.
Tire/wheel capacity front	7,500 lbs.		

Rear Weights

* GAWR rear	14,706 lbs.	* Axle capacity rear	14,706 lbs.
* Spring rating rear	14,706 lbs.	Tire/wheel capacity rear	15,000 lbs.

Off Road

Min ground clearance	8.2"
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Exterior Measurements

Vehicle body length	289.2"	Vehicle body width	80.0"
Vehicle body height	81.7"	Wheelbase	203.0"
Front brake diameter	15.4"	Rear brake diameter	15.8"
Rear frame height loaded	28.6"	Rear frame height unloaded	34.3"
Front track	74.8"	Rear track	74.0"
Vehicle turning radius	28.6'	Cab to axle	84.0"
Rear tire outside width	93.9"	Axle to end of frame	47.2"
Frame section modulus	12.7 cu.in.	Frame yield strength (psi)	50000.0
Frame rail width	34.2"	Front bumper to front axle	38.3"
Front bumper to back of cab	158.1"		

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Price Level: 420

Selected Equip & Specs (cont'd)

Interior Measurements

Max interior rear cargo volume 52.1 cu.ft. Interior rear cargo volume with seats folded 52.1 cu.ft.

Interior Volume

Total passenger volume 131.7 cu.ft.

Headroom

Headroom first-row 40.8" Headroom second-row 40.4"

Legroom

Leg room first-row 43.9" Leg room second-row 43.6"

Shoulder Room

Shoulder room first-row 66.7" Shoulder room second-row 65.9"

Hip Room

Hip room first-row 62.5" Hip room second-row 64.7"

Powertrain

Engine

* Engine **Powerstroke 6.7L V-8 diesel direct injection, DEVCT intercooled turbo, diesel, engine with 330HP** * Valves per cylinder 4
Engine cylinders V-8 Engine location Front mounted engine
* Ignition **Compression ignition system** Engine mounting direction Longitudinal mounted engine
Engine block material Iron engine block Cylinder head material Aluminum cylinder head

Engine Specs

* Displacement 6.7L * cc 405.9 cu.in.
* Bore 3.9" * Stroke 4.25"
* Compression ratio 15.2 SAEJ1349 AUG2004 compliant

Engine Power

* Horsepower 330 HP@2200 RPM * Torque 950 lb.-ft.@1800 RPM

Alternator

Alternator amps 250A Alternator type Heavy-duty alternator

Battery

* Battery amps 68Ah * Battery type Dual lead acid battery

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Price Level: 420

Selected Equip & Specs (cont'd)

Battery rating 750CCA

Battery run down protection Battery run down protection

Engine Extras

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

Radiator Radiator

Auxiliary power take-off Auxiliary power take-off

* **Engine retarder** **Engine retarder system**

Transmission

Transmission 10-speed automatic

Transmission electronic control Transmission electronic control

Overdrive transmission Overdrive transmission

Lock-up transmission Lock-up transmission

First gear ratio 4.615

Second gear ratio 2.919

Third gear ratio 2.132

Fourth gear ratio 1.773

Fifth gear ratio 1.519

Sixth gear ratio 1.277

Reverse gear ratio 4.695

Seventh gear ratio 1

Eighth gear ratio 0.851

Ninth gear ratio 0.687

Tenth gear ratio 0.632

Stall ratio 1.97

Selectable mode transmission Selectable mode transmission

Sequential shift control SelectShift Sequential shift control

Transmission oil cooler Transmission oil cooler

PTO transmission provision PTO transmission provision

Drive Type

4WD type Part-time 4WD

Drive type Four-wheel drive

Drivetrain

* **Axle ratio** **4.3**

Exhaust

Tailpipe Stainless steel single exhaust

Fuel

* **Fuel type** **diesel**

Fuel Tank

* **DEF capacity** **7.20 gal.**

Fuel tank capacity 40.00 gal.

Drive Feature

* **Limited slip differential** **Mechanical limited slip differential**

Traction control Driveline managed traction control

Locking hub control Auto locking hub control

Transfer case Electronic transfer case shift

Fuel Economy and Emissions

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Price Level: 420

Selected Equip & Specs (cont'd)

Fuel Economy

* **Secondary fuel type** **Diesel secondary fuel type**

Emissions

Emissions Federal emissions

Suspension and Handling

Suspension

Suspension Firm 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

Ventilated brakes Front and rear ventilated disc brakes

ABS brakes Four channel ABS brakes

ABS brakes 4-wheel antilock (ABS) brakes

Brake Assistance

Hill start assist Hill Start Assist

Brake assist system Brake assist system

Front Suspension

Anti-roll bar front Front anti-roll bar

Suspension ride type front Mono-beam rigid axle front suspension

Front Spring

* **HD front springs** **Heavy-duty front springs**

Springs front Front coil springs

Rear Spring

Springs rear Rear leaf springs

Rear springs Heavy-duty 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

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Selected Equip & Specs (cont'd)

Steering type number of wheels 2-wheel steering system

Exterior

Front Wheels

Front wheels diameter 19.5" Front wheels width 6"

Rear Wheels

Rear wheels diameter 19.5" Rear wheels width 6"

Front And Rear Wheels

Appearance argent Material steel

Front Tires

Aspect 70 Diameter 19.5"
Sidewalls BSW Speed S
Tread AS Type LT
Width 225mm Front wheel - RPM 647

Rear Tires

Aspect 70 Diameter 19.5"
Sidewalls BSW Speed S
Tread AS Type LT
Width 225mm Rear wheel - RPM 647

Body Exterior

Trailer

Towing wiring harness Trailer wiring harness Towing brake controller Trailer brake controller
Towing trailer sway Trailer sway control

Exterior Features

Number of doors 4 doors * Running boards Running boards
* Skid plate 1 underbody skid plate Front splash guards Front splash guards

Body

Body panels Aluminum body panels with side impact beams

Mirrors

Convex spotter Convex spotter in driver and passenger side door mirrors Turn signal in door mirrors Turn signal indicator in door mirrors

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Selected Equip & Specs (cont'd)

Tires

Front tires LT load rating G

Rear tires LT load rating G

Wheels

Dual rear wheels Dual rear wheels

* Wheel covers .. **Stainless steel wheel covers**

Convenience

Door Locks

Door locks Power door locks with 2 stage
unlocking
All-in-one key All-in-one remote fob and ignition
key

Keyfob door locks .. Keyfob activated door locks

Cruise Control

Cruise control Cruise control with steering
wheel mounted controls

Key Fob Controls

Fob remote vehicle controls ... FordPass Connect
smart device vehicle start control

Rear View Mirror

Day/Night rearview mirror. Day/Night rearview
mirror

Exterior Mirrors

Door mirrors Power door mirrors
Heated door mirrors Heated driver and
passenger side door mirrors

Folding door mirrors Manual folding door mirrors

Front Side Windows

First-row windows Power first-row windows

Floor Console

* Floor console **Partial floor console**

* Floor console storage .. **Floor console storage**

Overhead Console

Overhead console Full overhead console

Overhead console storage Overhead console
storage

Passenger Visor

Visor passenger mirror. ... Passenger visor mirror

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Selected Equip & Specs (cont'd)

Power Outlets

12V power outlets 2 12V power outlets

Rear Windshield

Rear windshield Fixed rear windshield

Storage

Number of beverage holders 8 beverage holders

Beverage holders rear Rear beverage holders

Illuminated glove box Illuminated glove box

Dashboard storage Dashboard storage

Beverage holders Front beverage holders

Glove box Illuminated locking glove box

Instrument panel storage Instrument panel covered bin

Windows Feature

One-touch up window Driver and passenger one-touch up windows

One-touch down window Driver and passenger one-touch down windows

Windows Rear Side

Second-row windows Power second-row windows

Miscellaneous

Trip computer Trip computer

Upfitter switches Upfitter switches

Over the air updates Over the air updates

PRND in IP PRND in IP

Accessory power Retained accessory power

Comfort

Climate Control

Climate control Manual climate control

Rear under seat ducts Rear under seat climate control ducts

Cabin air filter Cabin air filter

Headliner

Headliner material Cloth headliner material

Headliner coverage Full headliner coverage

Floor Trim

Floor covering Full vinyl floor covering

Floor coverage Full floor coverage

Second-Row Seat Trim

Rear seat upholstery Vinyl rear seat upholstery

Rear seatback upholstery Carpet rear seatback upholstery

Steering Wheel

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Price Level: 420

Selected Equip & Specs (cont'd)

Steering wheel telescopic steering wheel Manual telescopic steering wheel
Steering wheel tilt Manual tilting steering wheel

Steering wheel material Urethane steering wheel

Seats and Trim

Seat Capacity

* Seating capacity **5**

Front Seats

Driver seat direction Driver seat with 4-way directional controls
Passenger seat direction Front passenger seat with 4-way directional controls
Reclining passenger seat Manual reclining passenger seat
Front head restraints Height adjustable front seat head restraints
Reclining driver seat Manual reclining driver seat

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

* **Split front seats** **Bucket front seats**

Passenger seat fore/aft control Manual passenger seat fore/aft control

Front head restraint control Manual front seat head restraint control

Rear Seats

Bench seats Split-bench rear seat
Folding second-row seats 60-40 folding rear seats
Rear seat folding position Fold-up rear seat cushion
Rear head restraint control Manual rear seat head restraint control

Rear seats fixed or removable Fixed rear seats

Rear seat direction Front facing rear seat

Rear head restraints Height adjustable rear seat head restraints

Number of rear head restraints 3 rear seat head restraints

Lumbar Seats

Driver lumbar Manual driver seat lumbar

Front Seat Trim

Front seat upholstery Vinyl front seat upholstery

Front seatback upholstery Vinyl front seatback upholstery

Interior Accents

Interior accents Chrome interior accents

Gearshifter Material

Gearshifter material Urethane gear shifter material

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Selected Equip & Specs (cont'd)

Entertainment Features

LCD Displays

Primary touchscreen display Primary touchscreen display

Number of first-row LCD displays 2 total number of 1st row displays

LCD primary display size 8 inch primary LCD display

Radio Features

External memory SYNC 4 external memory control

Seek scan Seek scan

Speakers

Speakers Standard grade speakers

Speakers number 6

Audio Features

Steering mounted audio control Steering wheel mounted audio controls

Speed sensitive volume Speed sensitive volume

Voice activated audio SYNC 4 voice activated audio controls

Wireless streaming Wireless audio streaming

Lighting, Visibility and Instrumentation

Instrumentation

Trip odometer Trip odometer

Instrumentation display Digital/analog instrumentation display

Configurable instrumentation gauges Configurable instrumentation gauges

Instrumentation Displays

Temperature display Exterior temperature display

Driver information center Driver information center

Clock In-radio display clock

Compass Compass

Instrumentation Gauges

Tachometer Tachometer

Transmission temperature gauge Transmission fluid temperature gauge

* Turbo gauge Turbo/supercharger boost gauge

Engine/electric motor temperature gauge Engine/electric motor temperature gauge

Gauge cluster display size (inches) 4.20

Engine hour meter Engine hour meter

* DEF fluid gauge Diesel exhaust fluid (def) gauge

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Price Level: 420

Selected Equip & Specs (cont'd)

Instrumentation Warnings

Engine temperature warning	Engine temperature warning	Oil pressure warning	Oil pressure warning
Low fuel warning	Low fuel warning	Low brake fluid warning	Low brake fluid warning
Battery charge warning	Battery charge warning	Headlights on reminder	Headlights on reminder
Key in vehicle warning	Key in vehicle warning	Door ajar warning	Door ajar warning
Service interval warning	Service interval indicator	* Low diesel exhaust fluid (DEF) warning	Low diesel exhaust fluid (DEF) warning

Glass

Tinted windows Light tinted windows

Headlights

Headlights	Halogen headlights	Headlight type	Aero-composite headlights
Auto headlights	Autolamp auto on/off headlight control	Multiple headlights	Multiple enclosed headlights
Delay off headlights	Delay-off headlights	DRL preference setting	DRL preference setting

Front Windshield

Wipers .. Variable intermittent front windshield wipers

Interior Lighting

Illuminated entry	Illuminated entry	Variable panel light	Variable instrument panel light
Front reading lights	Front reading lights	Rear reading lights	Rear reading lights

Lights

Running lights	Daytime running lights	Interior courtesy lights	Fade interior courtesy lights
Clearance lights	Cab clearance lights	* High mount stop light	High mounted center stop light
Perimeter approach lighting	Remote activated perimeter approach lighting		

Technology and Telematics

Connectivity

Handsfree	SYNC 4 handsfree wireless device connectivity	Smart device integration	AppLink/Apple CarPlay and Android Auto smart device wireless mirroring
Emergency SOS	SYNC 4 911 Assist emergency SOS system via mobile device		

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Price Level: 420

Selected Equip & Specs (cont'd)

Internet Access

Internet access .. FordPass Connect 5G mobile hotspot internet access

USB Ports

USB ports 2 USB ports

Safety and Security

Airbags

Front impact airbag driver	Driver front impact airbag	Number of airbags	6 airbags
Front impact airbag passenger	Passenger front impact airbag	Front side impact airbag driver	Seat mounted side impact driver airbag
Front side impact airbag passenger	Seat mounted side impact front passenger airbag	Overhead airbags	Safety Canopy System curtain first and second-row overhead airbags

Seatbelts

Height adjustable seatbelts

Front height adjustable seatbelts

Security System

Immobilizer

SecuriLock immobilizer

Remote panic alarm

Remote panic alarm

Active Driving Assistance

Lane departure

Lane Departure Warning

Forward collision warning

Pre-Collision Assist with Automatic Emergency Braking (AEB) forward collision mitigation

Occupant Safety

Child door locks ..

Manual rear child safety door locks

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Gray-Daniels Ford | 201 Octavia Drive Brandon Mississippi | 390422437



2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420

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

Additional Warranty

Diesel Engine Warranty

Diesel engine warranty 60 months/100,000 miles

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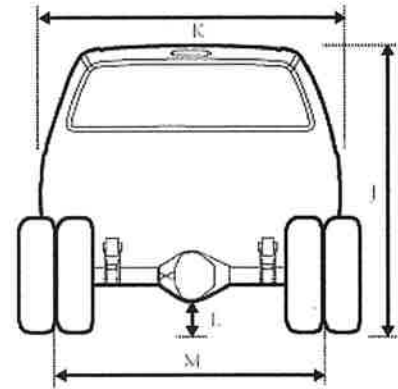
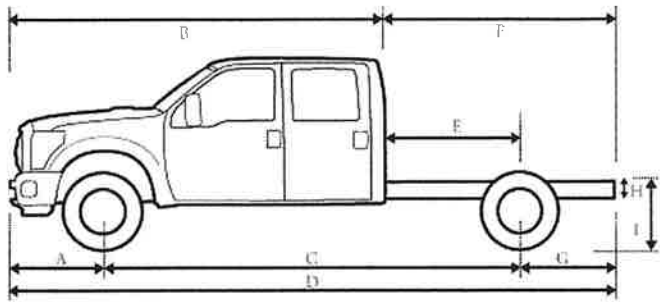


2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420

Vehicle Dimension and Performance Summary

Performance predictions in this report represent an estimate of vehicle performance based on standard operating conditions. Variations in customer equipment, load configuration, ambient conditions, and/or operator driving techniques can cause significant variations in vehicle performance. These values are not representative of results that may be shown in actual dynamometer tests. This report should therefore be used as a guide for comparative vehicle performance.



Dimensions

A	Front of Bumper to Front Axle	38.30 in.
B	Front Bumper to Back of Cab (BBC)	158.10 in.
C	Wheelbase (WB)	203.00 in.
D	Overall Length (OAL)	289.20 in.
E	Back of Cab to Rear Axle (CA)	84.00 in.
F	Back of Cab to End of Frame	131.20 in.
G	Rear Axle to End of Frame (AF)	47.20 in.
H	Frame Section Height	N/A
I	Rear Frame Height Unloaded	34.30 in.
I	Rear Frame Height Loaded	28.60 in.
J	Cab Height	81.70 in.
K	Body Width	80.00 in.
L	Maximum Ground Clearance	N/A
L	Minimum Ground Clearance	8.20 in.
M	Front Tread	74.80 in.
M	Rear Tread	74.00 in.

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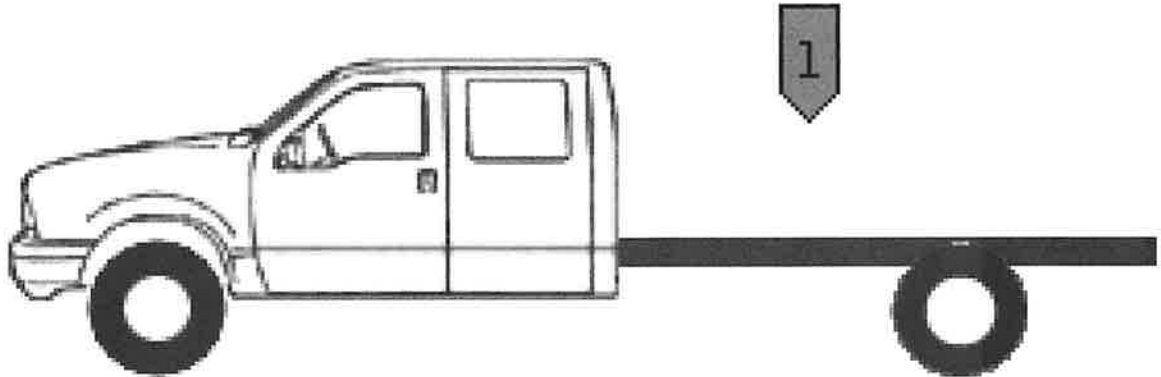
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2024 F-550 Chassis 4x4 SD Crew Cab 203" WB DRW XL (W5H)

Price Level: 420

Vehicle Dimension and Performance Summary (cont'd)



Weight

GVW	Front Axle	Rear Axle	Totals
Chassis	4,978 lbs	3,334 lbs	8,312 lbs
Body	0 lbs	0 lbs	0 lbs
Occupants Weight	600 lbs	300 lbs	900 lbs
1 Max Payload - (Max Payload)	1,922 lbs	8,366 lbs	10,288 lbs
TOTAL	7,500 lbs	12,000 lbs	19,500 lbs

Ratings	Front Axle	Rear Axle	GVWR
GAWR	7,500 lbs	14,706 lbs	19,500 lbs
Wheels/Tires	7,500 lbs	15,000 lbs	
Suspension	7,500 lbs	14,706 lbs	
Axle	7,500 lbs	14,706 lbs	
Legal Axle Limit	0 lbs	0 lbs	

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Price Level: 420

Vehicle Dimension and Performance Summary (cont'd)

Start, Grade and Speed

Start	Ratio	Desired	Calculated
Start grade capability in 1st gear	4.62	15.00 %	57.58 %
Start grade capability in reverse	4.70	15.00 %	58.58 %
Grade	Ratio	Desired	Calculated
Maximum grade in 8th gear	0.85	3.00 %	10.78 %
Maximum grade in 9th gear	0.69	3.00 %	8.70 %
Maximum grade in 10th gear	0.63	3.00 %	8.01 %
Speed		Desired	Calculated
Top Speed (level grade)		75 mph	90 mph
<i>To meet your requirement you need a maximum axle ratio of 5.17</i>			
Top Speed on 3% grade		55 mph	
<i>To meet your requirement you need a maximum of 122 hp</i>			
Cruise Speed		60 mph	78 mph
Engine RPM at desired cruise speed			1,758 rpm

Variables in Use

Start

Rear axle ratio:	4.30	Clutch engagement torque:	475 ft.lbs.
Tire size:	225/70R19.5 (647 rev/mile)	Torque conversion ratio:	1.97
Gross Vehicle Weight (GVW):	19,500 lbs		

Grade

Rear axle ratio:	4.30	Gross Vehicle Weight (GVW):	19,500 lbs
Tire size:	225/70R19.5 (647 rev/mile)	Peak engine torque:	950 ft.lbs.

Speed

Engine Power:	330 hp @ 2,200 rpm	Worst road surface	Typical Highway
Governed RPM:	2,640 rpm	Final Drive Ratio:	0.63
Frontal Area:	40.39 Sq.Ft.	Drag Coefficient	0.80
Cruising RPM	2,300 rpm		

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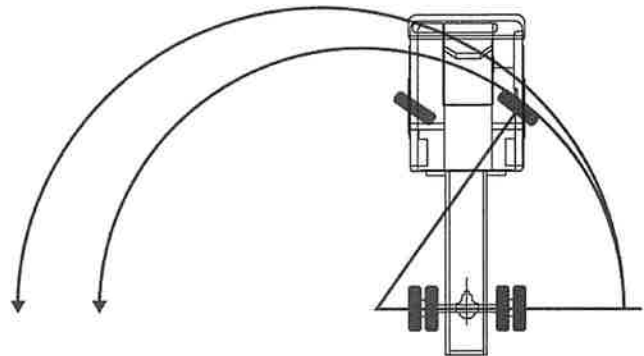
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Vehicle Dimension and Performance Summary (cont'd)

Turning Radius

Turning Radius 28.60 ft



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