



## COMPETITIVE COMPARISON GUIDE: LIGHT DUTY



- ▶ International® TerraStar™
- ▶ Ford
- ▶ Dodge



A NAVISTAR COMPANY



# A REAL-WORLD TEST

TerraStar ... the name says it all. A truck born out of International's 100-years of commercial truck experience — engineered for best-in-class performance in the gritty world you work in.

Beginning with commercial-duty DNA, the largest cab in its class, best-in-class visibility, 80,000 PSI frames and MaxxForce® power, TerraStar from the get-go was designed to exceed the expectations of light-duty truck customers ... and to set new industry Class 4/5 market standards.

To discover how well we succeeded, we put TerraStar to a real-world test — against its real-life competitors. A test conducted by a disinterested third party of trucking professionals.

The tests were conducted with the highest level of objectivity. Meticulous attention was paid to detail. Measurements were taken from “actual built” vehicles. Specifications, as closely as possible, matched each manufacturer’s equipment availability and compatibility parameters. And most importantly, in order to maintain absolute consistency, measurements were performed in precisely the same manner across all models.

Word’s gotten out. Our competitors know how good we are. Here’s your opportunity to find out for yourself.

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A Middleweight Punch

From a design perspective, TerraStar is a commercial grade truck.

We began by using our medium duty commercial experience and came up with a uniquely tough Class 4/5 entry.

Weighing in as a light weight, TerraStar delivers a middleweight punch. Nimble on its feet ... it's perfect for maneuvering around congested job sites and city streets.

But with the largest cab in its class, 80,000 PSI frames and MaxxForce® power, TerraStar can mix it up in the toughest commercial vocations.

- Construction
- Landscaping
- Recovery
- Pickup and Delivery
- Municipal
- Fire/rescue

Configurations	BBC	107"	Transmissions	Allison: 1000 Series (HS, RDS, EVS) automatic
	BA	32.5"	Front Axles	Dana Spicer: 6,000 – 7,000 lbs.
	Axle	4X2	Rear Axles	Dana Spicer: 10,000 – 13,500 lbs.
	Cab	Standard Cab Extended Cab Crew Cab	Brakes	Hydraulic Disc Brakes with ABS
	Engine	MaxxForce® 7: 300HP / 660 lbs.-ft.	Tires	Bridgestone, Continental, Michelin, Goodyear





## COMPETITIVE SET

In real-world testing, TerraStar went cab-to-cab, axle-to-axle, powertrain-to-powertrain, measurement-to-measurement against its two leading market competitors: the Ford F-450/550 and the Dodge Ram 4500/5500.

Everything you essentially need to know about them ... their weight ratings, their engines, their transmissions, axles, comparisons, tires and warranties ... is in the comparisons.

To guarantee an apples-to-apples comparison — the specifications match, as closely as possible, each manufacturer's equipment availability and compatibility parameters.

<b>Model:</b>	TerraStar	Ford F-550	Dodge 5500
<b>Model Year</b>	2012	2011	2011
<b>BBC:</b>	107"	118"	123"
<b>Engine:</b>	MaxxForce 7 300 HP	Power Stroke 300 HP	Cummins ISB 305 HP
<b>Transmission:</b>	Allison 10000 RDS automatic	SelectShift 6-speed automatic	AISIN 6-Speed automatic
<b>Wheelbase:</b>	134"	201"	168"
<b>Frame:</b>	80,000 PSI	36,000 PSI	50,000 PSI
<b>Front Axle:</b>	I-Beam 6,000 lbs.	Monobeam 7,000 lbs.	Solid non-independent 7,000 lbs.
<b>Rear Axle:</b>	Dana 10,000 lbs.	Dana 14,706 lbs.	Dana 13,500 lbs.
<b>Suspension:</b>	11,000 lb. V-rate	15,000 lb. Multi-leaf	13,500 lb. Multi-leaf
<b>GVWR:</b>	16,000 lbs.	19,500 lbs.	19,500 lbs.
<b>Tire Manufacturer:</b>	Continental	Continental	Continental
<b>Tire Size:</b>	225/70R 19.5	225/70R 19.5	225/70R 19.5
<b>Front Tire Tread:</b>	HSR	HSR	HSR
<b>Rear Tire Tread:</b>	HDR	HSR	HDR
<b>Base Warranty:</b>	3 years	3 years	3 years





## CAB DESIGN

### Cab Construction

- ▶ Medium duty, commercially-proven cab design
- ▶ High strength, low alloy (HSLA) reinforced, cold rolled steel cab
- ▶ High strength, double-sided galvanized steel construction
- ▶ Solid feeling, stable riding 82" wide cab
- ▶ International cabs, extended cabs, and crew cabs pass the more rigorous SAE J2422 cab roof strength test versus the standard European ECE 29 roof strength requirement, which only tests for a uniform vertical load applied to the roof. SAE J2422 also tests for angled side loads which is a National Fire Protection Association (NFPA) requirement.\*

### Entry/Egress

- ▶ 62° door swing and 51.75" door height makes it one of the easiest cabs in the industry to access
- ▶ Large, sturdy frame-mounted cab steps for safe entry

### Hood and Windshield Design

- ▶ Best-in-class commercial style tilt-away hood offers unobstructed access to the engine compartment.
- ▶ 15° sloping hood for improved aerodynamics
- ▶ Plenum design channels engine-intake air through ducts removing particulate matter and moisture as it flows, providing cleaner, dryer air to air cleaner
- ▶ Large, curved, swept-back windshield helps deflect road debris and provides excellent visibility







## CAB AND DOORS

With world class fit and finish the TerraStar cab is comfortable and durable — comprised of

- ▶ **High Strength Low Alloy** (HSLA) double-sided galvanized steel and standard cold rolled steel
- ▶ HSLA in critical cab areas: A-pillars, cab mounts, dash and under-body — for greater durability
- ▶ **“E-Coating”** — welded cab assembly receives a phosphate bath that etches the material for enhanced adhesion of the coating...then dipped into an electro-statically applied primer (E-coat)
- ▶ Base coat/urethane clear coat paint process offers outstanding resistance to corrosion and fading, and is backed by a 12-month unlimited cab warranty

### Cab Durability

One-piece door frame and panels are major factors in cab durability, structure and sealing.

- ▶ One piece of steel surrounds entire door opening providing superior structural integrity

### Door Design

Well balanced doors open to 62° — include integrated door check feature.

- ▶ Flush, ergonomic door handles are large enough for gloved hands
- ▶ E-Coated internal door construction components are designed to be operated in wet conditions

**TERRAStar**  
POWERED BY MAXXFORCE



BBC	107"
Cabs	Standard, 26" Extended and 44" Crew cab
Cab Construction	High-strength, welded steel
Cab Suspension	4-Point rubber mount
Door Hinge	Internal door hinge design
Door Width	36.75"
Door Swing Angle	62°
Door Opening Height	51.75"
Cab Floor	Flat across
Mirror Type	Commercial breakaway type with convex
Mirror Size	Main Mirror: 110 sq. in. Convex: 50 sq. in.

Ford  
F-450/550



118"
Regular, 21" Extended and 35" Crew cab
Welded steel
Rubber mounts
Internal door hinge design
40.25"
62°
47.25"
Contoured with transmission tunnel in center
Automotive-style, with integrated convex
Main Mirror: 53 sq. in. Convex: 21 sq. in.

Dodge  
4500/5500



123"
Regular and 29" Crew cab
Welded steel
Glycol filled hydro mounts
Internal automotive-style door hinge design
42.50"
66°
46.50"
Contoured with transmission tunnel in center
Automotive-style, fold-in arms with integrated convex. Mirror head can be rotated 90° to accommodate rear visibility for trailer towing
Main Mirror: 52 sq. in. Convex: 16 sq. in.

### Benefits

- ▶ A proven medium-duty commercial truck platform
- ▶ Shorter BBC provides a more compact vehicle and excellent weight transfer for maximized maneuverability and payload capacity
- ▶ A flat floor provides ample room and makes installation of upfitter equipment easier
- ▶ Commercial truck style breakaway mirrors help protect doors from damage if the mirror is hit
- ▶ Large mirrors increase driver's view and supports safety



HOOD

**The three-piece design** of the TerraStar hood features a high-strength composite hood and fiber-reinforced composite fenders.

- ▶ Requires less reinforcements for a lighter hood
- ▶ Replace just the damaged panel – not entire hood
- ▶ Aerodynamic 75° sloping hood
- ▶ Full-tilting hood makes serviceability easy
- ▶ Sealed beam headlights are easily accessible

**Integrated Plenum Design**

- ▶ Effectively removes particles and moisture from the ambient atmosphere — providing cleaner, dryer air to the air cleaner
- ▶ Requires less reinforcing, resulting in a lighter and easier to manage hood

**Well-Balanced, Lighter-Feeling Hood**

- ▶ Opens with a minimal 17.7 lbs. of effort
- ▶ Hood is easily operated from ground level
- ▶ Features an integral torsion bar, dual cables and rebound springs for a light-weight feel and trouble-free design



Hood Construction	3-piece high strength composite
Hood Design	Full-tilting
Hood Mechanics	Dual cable stays and springs
Tilt Assist	Torsion bar
Splash Shields	Stationary mounted to frame Commercial grade design
Air Intake	Integrated plenum design with LH side of hood intake
Hood Operation	Simple to close hood, standing at ground level for nearly any driver

Ford  
F-450/550



Stamped sheet metal
Automotive-style front opening
Automotive-style dual gas struts
Not available
Located in engine compartment mounted to inboard side of wheel wells
RH side of engine compartment below fender
Smaller drivers may need to stand on front bumper to reach raised hood

Dodge  
4500/5500



Stamped sheet metal
Automotive-style front opening
Automotive-style dual gas struts
Not available
Located in engine compartment mounted to inboard side of wheel wells
RH side of engine with intake opening on inboard side of wheel well but no apparent outboard intake opening
Smaller drivers may need to stand on front bumper to reach raised hood
Note: Hood release lever located at bottom of dash console, under steering column—not convenient location if sitting in cab

**Benefits**

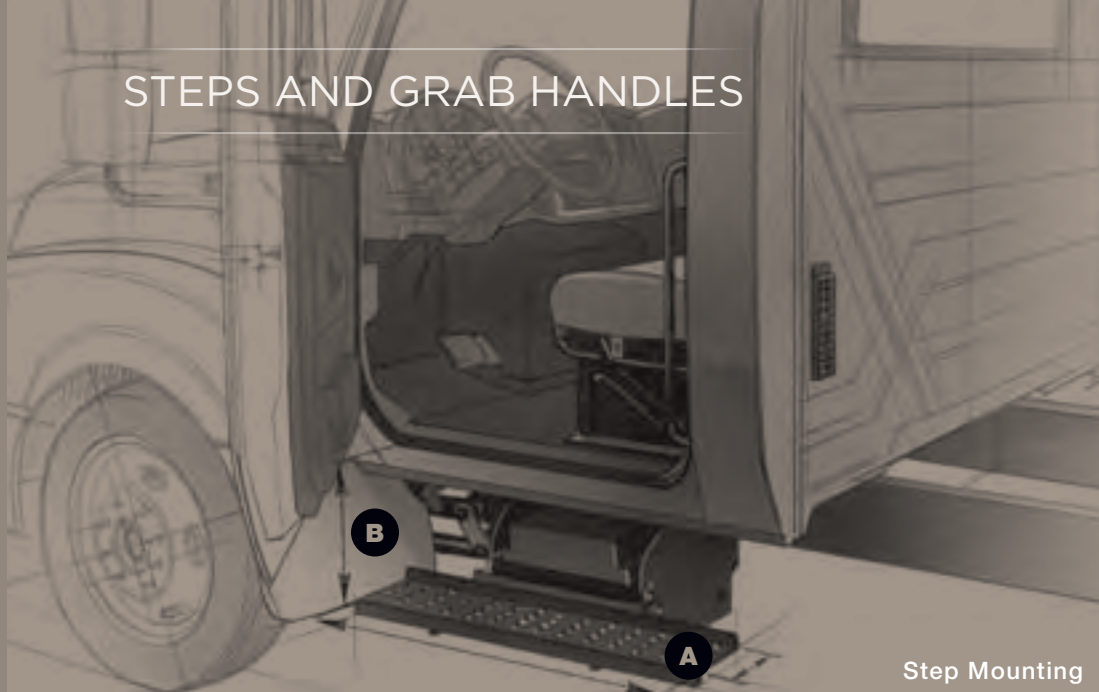
- ▶ A true commercial-style hood instead of a pickup carryover
- ▶ Only full forward-tilting hood in its class
- ▶ Easy to close hood from ground level
- ▶ Fender, grille, hood all tilt out of the way
- ▶ Best-in-class ease of service to entire engine and front frame

**Hood tilt methodology**

The same, average sized person (5'10") performed 7 hood pull trials with a digital meter for each of the 4 vehicles. We discarded the high and low measurements and averaged the remaining 5 to determine our result. This result represents the greatest effort until the point momentum takes over.



## STEPS AND GRAB HANDLES



**Cab entry and egress** is one of the most important features related to driver safety, satisfaction and productivity.

### Cab steps

- ▶ Commercial Grade construction and design for enhanced durability
- ▶ Industry standard tread design
- ▶ A large surface area consistently spaced for predictable cab entry
- ▶ Off-set design — provides a stable platform for bulky work boots
- ▶ Ergonomically Designed spacing to help minimize driver fatigue

### Grab Handles

Well positioned, ergonomically designed and are available in different configurations:

- ▶ A-Pillar
- ▶ B-Pillar
- ▶ Interior or exterior, LH or RH side



#### Step Mounting

Frame / battery-box mounted

#### Step Material

Commercial grade steel

#### Step Size

Length: 35.25"  
Width: 6"

#### Area

**A** 211.5 sq. in.

#### Step Off-Set

1st step to cab: 8"

#### Step Spacing

**B**

Ground-to-step: 19"  
Step-to-cab: 14.25"

#### Exterior Grab Handles

Optional LH & RH at B-Pillar  
Chrome with optional anti-slip rubber insert or black aluminum

#### Interior Grab Handles

LH: B-Pillar  
RH: A- and B-Pillar

#### Length

A-Pillar: 11"  
B-Pillar: 23.50"  
Door: 5"

Ford  
F-450/550



Cab-mounted running boards

Molded plastic

Length: 40"  
Width: 6"

240 sq. in.

1st step to cab: 6"

Ground-to-step: 17.50"  
Step-to-cab: 9"

Not Available  
Not Available

LH: A-Pillar  
RH: A-Pillar

A-Pillar: 8"  
B-Pillar: Not available  
Door: 5"

Dodge  
4500/5500



Standard: No step/  
running boards

Optional: Under-cab mounted  
running boards in either black  
or chrome

Not applicable

Not applicable  
Not applicable

Not applicable

Not applicable

Ground to cab: 28.5"  
Not applicable

Not Available  
Not Available

LH: A-Pillar  
RH: A-Pillar

A-Pillar: 6.50"  
B-Pillar: Not available  
Door: 4.75"

### Benefits

- ▶ Purposely designed for the work truck environment
- ▶ Commercial Grade strength and durability
- ▶ Steps are large enough to accommodate bulky work boots
- ▶ Optional exterior grab handles for added safety and entry/egress
- ▶ Step placement and spacing with available exterior grab handles are designed to provide proper 3-point cab entry and exit





CAB GLASS

Large, Swept-Back Windshield

- ▶ Improves fuel economy
- ▶ Provides outstanding visibility and reduces the risk of damage from road debris
- ▶ Improve cab sealing to reduce exterior noise and water leakage

A-pillars Positioned to

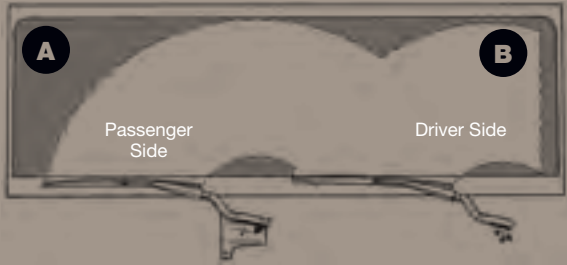
- ▶ Minimize snow-packing
- ▶ Improve forward and peripheral visibility
- ▶ Reduce road noise while providing a dry and comfortable driver environment

Available Heated Windshield

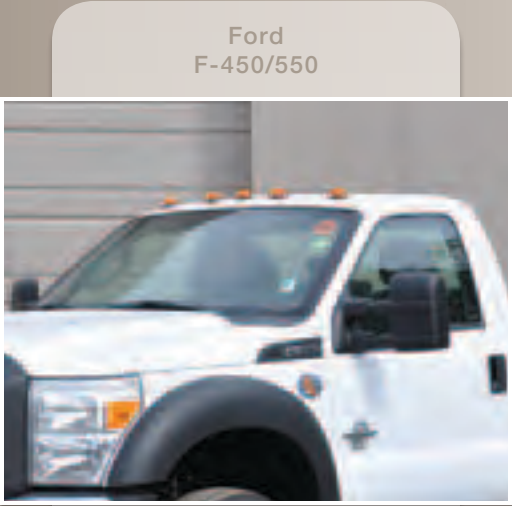
- ▶ Is not offered by these competitors
- ▶ Windshield is heated at the base to help reduce snow and ice packing in the cowl tray

A Standard Functional Vent Window

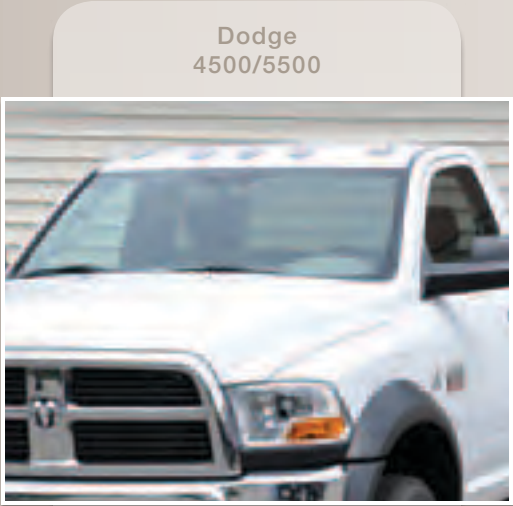
- ▶ Improves ventilation without operating the HVAC
- ▶ Directs fresh air into the cab exactly where needed



Total Cab Viewable Glass Area	<b>A</b>	3,639 sq. in.
Total Viewable Windshield Area		1,661 sq. in.
Windshield Slope		64°
Heated Windshield		Available
Wiper Coverage	<b>B</b>	1,290 sq. in., 78%
Vent Window		Standard



3,570 sq.in.
1,511 sq. in.
37°
Not Available
1,212 sq. in., 80%
Not Available



3,402 sq.in.
1,521 sq. in.
37°
Not Available
1,198 sq. in., 79%
Not available

Benefits

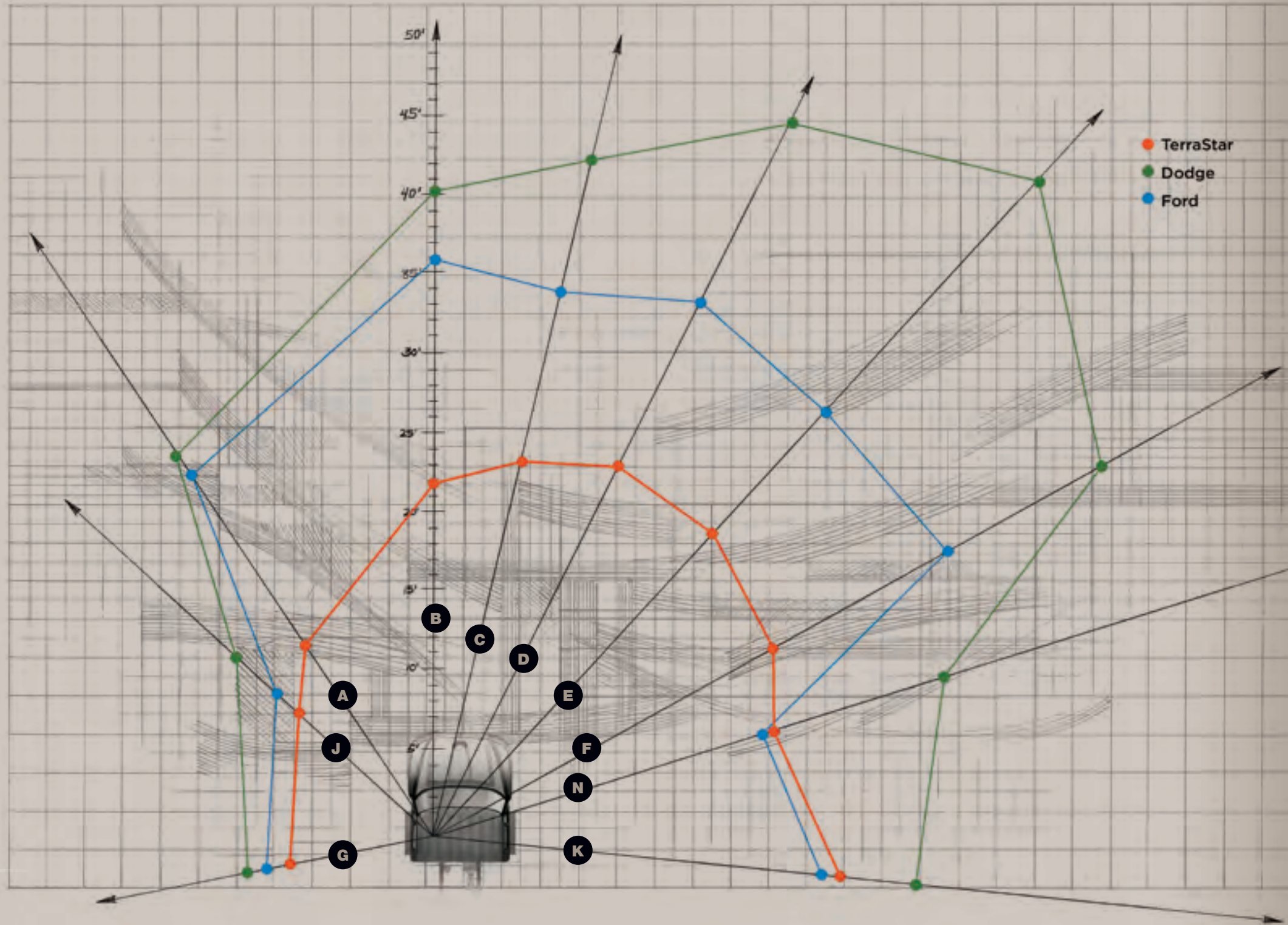
- ▶ Commanding view of the road
- ▶ Optional heated windshield for safe winter operation
- ▶ Vent window allows for superior ventilation
- ▶ Excellent 360 degree view around cab

Glass area methodology

Glass and wiper area was determined by placing a transparent overlay over the glass, outlining only the **viewable** area (total glass less blacked-out, border areas, etc.) and transposing against scaled engineering graph paper.



## VISIBILITY



**Visibility is vital to driver comfort and safety.** Poor sight lines — especially in congested areas — adds stress and strain while reducing productivity. TerraStar provides consistent forward visibility that is competitive in all areas.

Many things affect visibility:

- ▶ Hood shape and length
- ▶ Windshield design
- ▶ Positioning of pillars, wipers mirrors and hood ornaments
- ▶ Height and design of the fenders and door glass

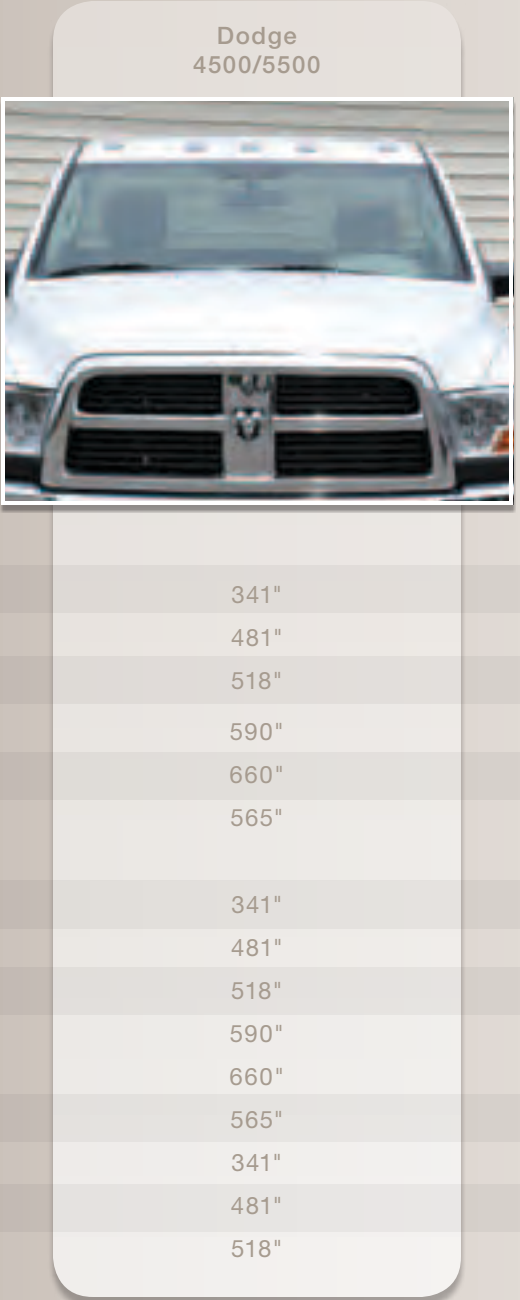
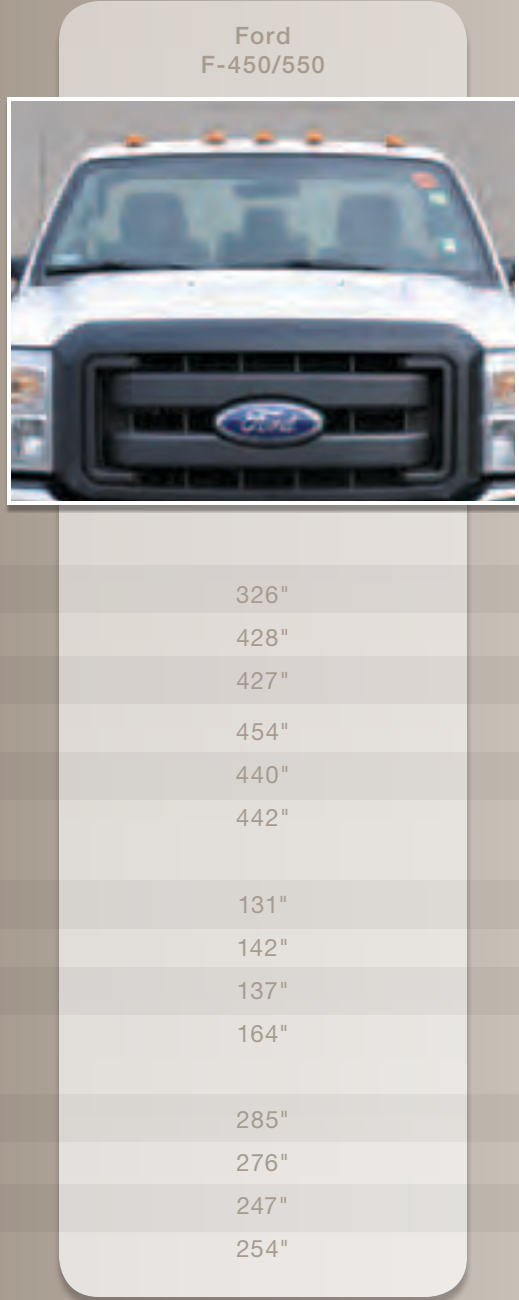
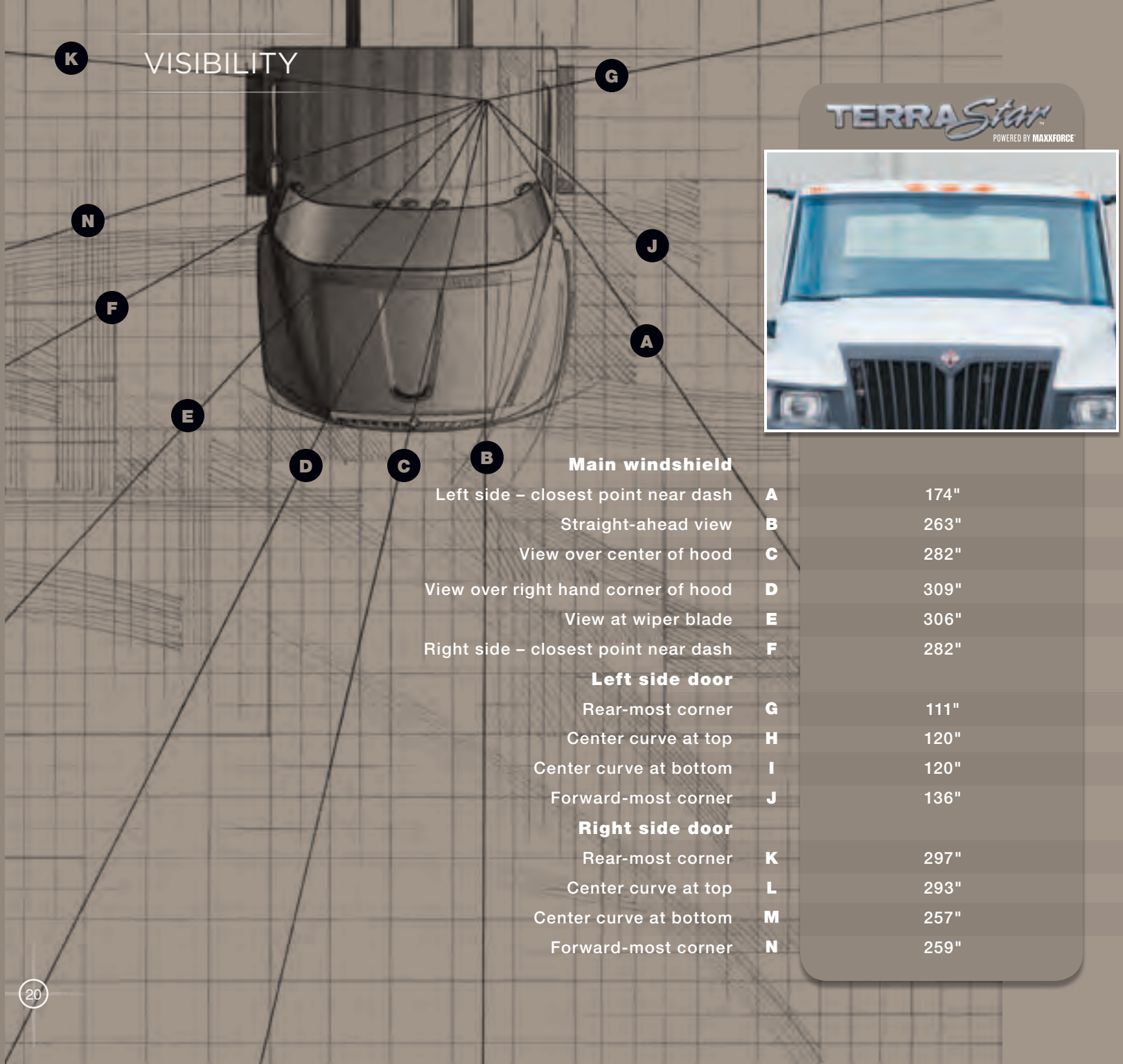
### Visibility Methodology

Our standard reference position represents a natural, comfortable seating position for an average sized (5'10") person.

A major factor in visibility is the driver's position within the cab. Due to the lack of availability of variable height suspension seating and much lower cab heights in many competing light duty models (in some cases nearly 12") drivers generally sit lower in the cab. This lowers the driver's perspective and reduces visibility. The driver sits higher in the TerraStar cab, thereby improving visibility.

The ranging pivots about our reference position and projects at regular intervals as represented by the noted variables. The point at which the projection becomes visible at ground level represents the closest an object becomes visible to the driver, as seated in our reference position.





- Benefits**
- ▶ **Best-in-class** — affords the driver a commanding view of the road
  - ▶ Improves safety for the driver and those he shares the road with
  - ▶ Minimizes the chance of costly vehicle damage
  - ▶ Superior visibility eases driver stress and improves productivity
  - ▶ Excellent visibility improves performance within tight job sites and congested city streets
  - ▶ Provides the driver with superior perspective to negotiate difficult conditions



## CAB INTERIOR

### Quality Ride

- ▶ Four-point rubber cab mounts isolate the cab from road noise and vibration
- ▶ Premium cab insulation and tight, automotive-grade cab seam tolerances reduce noise, vibration and harshness generated by severe temperatures and road noise

### Comfort and Productivity

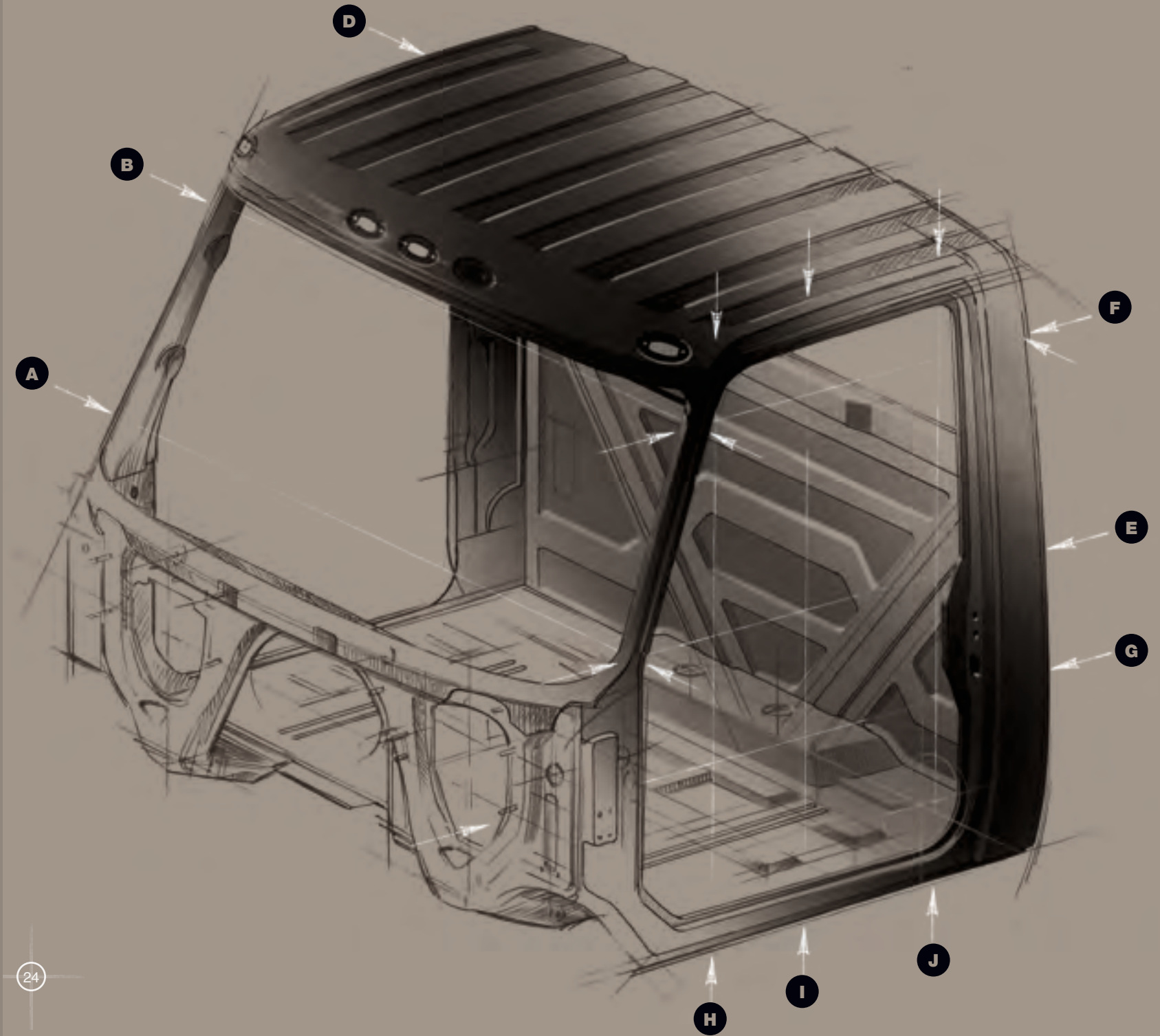
- ▶ The 82" cab is wide enough to be comfortable on the inside ... and small enough to keep it maneuverable on the job
- ▶ High-output HVAC systems and available state-of-the-art filtration systems help keep occupants productive in extreme environments
- ▶ Standard overhead console, dual cup holders, fully trimmed cab with no exposed sheet metal, driver's door pocket, the list goes on
- ▶ Numerous seat options enhance driver comfort

### Easy Upfitting

- ▶ Center dash panels are able to accommodate banks of auxiliary switches for a more seamless integration of aftermarket controls
- ▶ Flat cab floor allows for routine installation of body control equipment







## CAB SIZE

### The TerraStar Advantage

In work truck applications, you need a cab that is large enough to pack a punch, but small enough to be quick on its feet.

- › A roomy, comfortable cab — with plenty of space for body equipment controls.
- › The cab is spacious, yet comfortably trim ... with an overall exterior width of 82"
- › All the advantages of a medium duty cab

### Interior

- › Interior width is the Best-in-class — 8" wider at the side glass than the F-550
- › Cab height is 11" greater than the competition
- › The most headroom in its class
- › Cab volume is 30 percent larger than the F-550, and nearly 20% larger than Dodge 5500

### TerraStar's Flat Floor

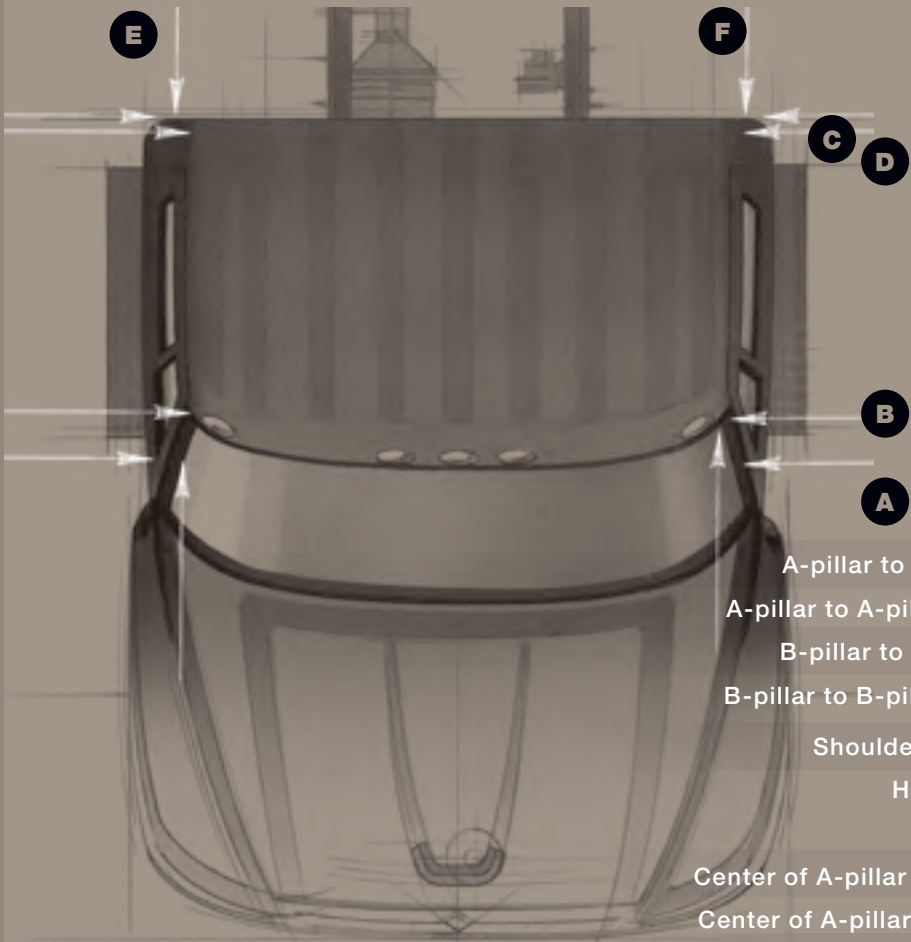
- › Supports trouble-free installation of upfitter equipment and body control systems
- › The F-550 and Dodge 5500 have a transmission tunnel running down the center of the cab

### Cab Measurement Methodology

All vehicle measurements were obtained by the same personnel, in the same manner, at the same interior reference points — using (wherever possible) a digital range meter with an accuracy rating of  $\pm 1.5\text{mm}$ . Measurements were rounded off to the nearest .25".



CAB SIZE



Width		
A-pillar to A-pillar @ Dash	A	69.25"
A-pillar to A-pillar @ Headliner	B	65.75"
B-pillar to B-pillar @ Dash	C	72.00"
B-pillar to B-pillar @ Headliner	D	68.50"
Shoulder Level @ Glass		79.25"
Hip Level @ Door		71.00"
Depth		
Center of A-pillar to BOC @ Dash	E	43.00"
Center of A-pillar to BOC @ Roof	F	36.25"
Center-Line Fuel Pedal to BOC	G	46.50"
Height		
Floor To Ceiling @ Edge Of Dash	H	52.25"
Floor To Ceiling @ Front Of Seat	I	56.50"
Floor to Ceiling @ B-pillar	J	56.00"
Cab Volume (cu. ft.)		91.80

TERRAStar  
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Ford  
F-450/550



59.25"
51.50"
63.00"
51.00"
70.50"
60.75"
47.75"
34.50"
52.50"
44.25"
45.50"
42.00"
64.17

Dodge  
4500/5500

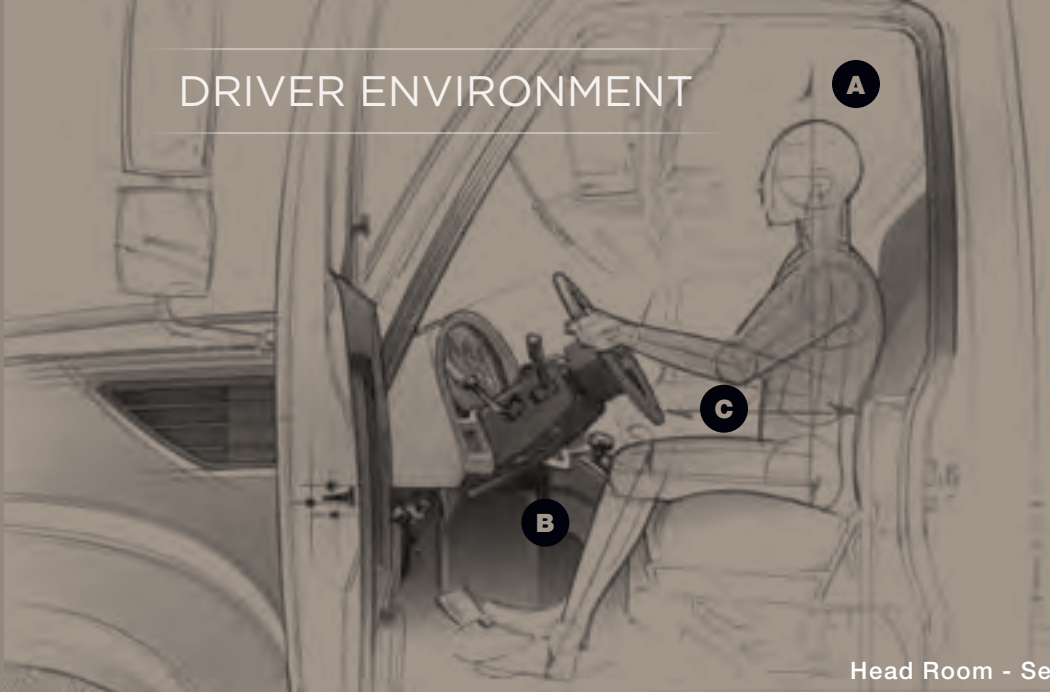


58.25"
49.75"
61.75"
52.25"
69.75"
62.75"
53.50"
37.25"
58.50"
45.75"
45.75"
48.50"
74.61

Benefits

- ▶ Best-in-class cab height
- ▶ 30 percent larger cab volume than the F-550
- ▶ Nearly 20% larger cab volume than Dodge 5500
- ▶ Best-in-class leg room and belly room, easily seats three people





DRIVER ENVIRONMENT

Driver Comfort

- ▶ Ergonomic dash layout, IP design and steering wheel positioning
- ▶ The high-output HVAC system: 30,000 heating BTUs/24,000 air conditioning BTUs
- ▶ Tight lap joint tolerances provide superior noise and temperature insulation
- ▶ Four-point cab mounts isolate the cab from the road noise and vibration
- ▶ Available pre-filters and heavy particle filters further protect the air quality within the cab under the harshest environmental conditions

Leg and Head Room

- ▶ Head room is superior to all of the measured competitors
- ▶ Optional adjustable tilt telescopic steering column



Head Room - Seat low **A**

39.5"

Head Room - Seat high

34"

Leg Room - Smallest **B**

20.75"

Leg Room - Largest

29.5"

Average Leg Room\*

25"

Maximum Belly Room **C**

17"

Interior Noise Levels

@ 750 RPM

62.6-68.9 db

@ 1500 RPM

66.5-80.5 db

Exterior Noise Levels

6' forward of grille

@ 750 RPM

72.1-73.9 db

\* Seat centered horizontally and vertically

\*\* Fixed vertical seat travel

Ford  
F-450/550



27.75" \*\*

27.75" \*\*

20.25"

27.5"

23.75"

19"

49.3 db - 55.9 db

54.5 db - 60.2 db

57.0 db - 68.9 db

Dodge  
4500/5500



34" \*\*

34" \*\*

19.75"

26.75"

23"

20.5"

58.0 db - 69.1 db

60.4 db - 63.6 db

71.9 db - 73.3 db

Benefits

- ▶ Greater head room and leg room for maximum driver comfort and productivity
- ▶ Multiple seat options meet individual needs
- ▶ Available air seats — not offered by the competition

Noise level methodology

Noise levels were measured using a tripod-mounted sound level meter (accuracy rated to ±2 db) positioned consistently for each model. Readings were taken over an approximate 20-second recording with the high and low noted for that period.



INTERIOR EQUIPMENT



Comfort and Productivity

- TerraStar provides the flexibility to outfit the cab for maximum productivity and the equipment for a comfortable work space.
- ▶ Two available trim levels, each with a wide array of available options
  - ▶ Trim panels cover exposed sheet metal to help insulate the cab from noise and temperature
  - ▶ Additional insulation is standard with the premium level interior
  - ▶ A standard netted overhead console and driver's side door storage compartment — part of an optional package on the competitors

Seating Configurations

- TerraStar seat configurations include:
- ▶ Full-width bench seat
  - ▶ Hi-back/ Mid-back
  - ▶ 2-man passenger seats
  - ▶ Available in fixed and Air Suspension
  - ▶ Most of the above seats are not available from our competitors

Trim Levels	2 available trim levels
Standard Interior Features	<ul style="list-style-type: none"><li>• Standard overhead console with retainer nets</li><li>• (2) Standard console-mtd cup holders, additional cup holder with optional brake lever</li><li>• Standard driver door storage compartment</li><li>• Standard full-width bench seat</li></ul>
Available seat types	<ul style="list-style-type: none"><li>• Full width bench</li><li>• Optional 2-man passenger</li><li>• Optional fixed high back</li><li>• Optional self-contained air-ride</li></ul>
Horizontal seat travel	7"
Vertical seat travel	5.5" (with optional air-ride seats)

Ford  
F-450/550



3 available trim levels (trim levels determine content)
XL Trim: <ul style="list-style-type: none"><li>• Door panel, with armrest</li><li>• 40/20/40 vinyl bench seat with center cup holder/storage</li></ul>
XLT Trim: <ul style="list-style-type: none"><li>• Upper and lower door pockets</li><li>• (2) I/P mounted cup holders</li></ul>
Lariat Trim: <ul style="list-style-type: none"><li>• Overhead console with garage opener and sunglass pocket</li></ul>
40/20/40 Split Bench
8"
Fixed only

Dodge  
4500/5500



2 available trim levels (trim levels determine content)
ST Trim: <ul style="list-style-type: none"><li>• 40/20/40 vinyl Seat</li><li>• Mini Floor console</li><li>• Behind the seat storage bin</li></ul>
SLT trim: <ul style="list-style-type: none"><li>• Vinyl door trim with pocket</li><li>• Overhead console with ambient temperature gauge</li></ul>
Laramie trim: <ul style="list-style-type: none"><li>• Package applies to crew cab only</li></ul>
40/20/40 Split Bench, vinyl or cloth, manual adjustment
Optional power adjust
Optional premium cloth power bucket seats
9"
Fixed only

Benefits

- ▶ Interior features are available individually, not in packages
- ▶ (4) different seat types, including the only air seat in its class
- ▶ The only standard over head console on all models



# CHASSIS

## Frame and Axle Ratings

- High-strength, low alloy steel rails rated at 80,000 PSI offers the highest yield strength rails in its class
- Standard C-Channel reinforcement over transitional rail area
- Bolt-on front frame extension option
- Custom frame piercing minimizes open holes and maximizes frame strength
- Frames are squared prior to assembly to ensure proper geometry during assembly

## Axles

- 6,000 and 7,000 lbs. set-forward front I-beam axles
- 10,000 - 13,500 lbs. single reduction rear axles
- Variable deflection rate steel spring suspension
- International Ride Optimized Suspension (IROS) air ride suspension\*

## Electrical

- Multiplexed electrical system reduces wiring and simplifies circuit design
- Well organized and efficiently routed chassis lines help prevent electrical problems and simplify diagnostics

## Diamond Logic® Application Solutions

- Streamlines the process of integrating equipment into the chassis electrical system
- Utilizes chassis diagnostics tools for integrated body equipment improving quality

## Exhaust Equipment

- Horizontal exhaust system mounted under-rail allows for clean top-of-rail CA
- Ensures efficient upfitting and helps minimize post-production costs

\*Available for the TerraStar Spring, 2011





FRAME AND EQUIPMENT



TerraStar's Frame

- Provides the highest yield strength among all competitors measured.
- ▶ More wheelbase options offer greater flexibility for custom body installations
  - ▶ High-strength, low alloy steel variable depth C-Channel rail
  - ▶ Durable and rugged 80,000 PSI yield strength rails
  - ▶ Custom piercing minimizes holes, maximizes strength
  - ▶ Frames, crossmembers and spring hangers are arranged and clamped in place prior to assembly to assure proper squaring

Additional Frame Feature

- ▶ 4" bolt-on front frame bumper extension protects front frame components in severe-duty applications

Fuel Tanks

- ▶ Standard, between rails composite tank
- ▶ Optional between the rails steel tank
- ▶ Optional non-polished aluminum tank, mounted RH side, under cab



Wheelbases	Regular Cab: 134", 158", 183" & 195" Extended: 160", 185" & 209" Crew Cab: 179" & 203"
Yield Strength (PSI)	80,000 PSI
Frame Construction	Variable depth stamped steel frame rails custom-pierced to maximize rail strength
Section Modulus	8.68 – 26.05
RBM	694,700 – 2,084,000
Reinforcement	Standard outer C-Channel over frame transitional area
Bumper Extension	Optional 4" bolt-on
Fuel Tanks	40 U.S. gallon standard between rails Optional RH rail, under cab
Material	Standard composite (plastic) Optional between the rails painted steel or non-polished aluminum tank, mtd RH side under cab

Ford  
F-450/550



Regular cab: 141", 165", 189" & 201" Extended Cab: 162" & 186" Crew Cab: 176" & 200"
36,000 PSI
Variable depth front splayed steel frame multiple standard piercings in rail to allow for different component mountings
10.1; 17.2 with 185.8, 188.8 and 200.8 W.B.'s or optional payload package
363,600 or 619,200
Not available
Not available
Gas: 28 U.S. gallon standard 40 U.S. gallon optional  Diesel: 40 U.S. gallon standard 28 gal additional; optional
Composite (plastic)

Dodge  
4500/5500



Regular cab: 144", 168", 192" & 204" Crew Cab: 173" & 197"
50,000 PSI
Variable depth front splayed steel frame multiple standard piercings in rail to allow for different component mountings
Not Published
Not Published
Standard outer "L" reinforcement in transition area on frame rail
Not available
Gas: 52 U.S. gallon standard 22 U.S. gallon optional
Composite (plastic)

Benefits

- ▶ Incremental wheel bases allow more customizable body installations
- ▶ With the highest frame yield strength in its class, TerraStar is one of the most rugged and durable trucks in its market
- ▶ For added toughness, TerraStar has standard outer channel frame reinforcement over the critical transitional area
- ▶ The only OEM that offers an optional front bumper extension, providing added protection for front end components in severe work environments
- ▶ Fuel tank choices and simple locations allow flexible body mounting and installation
- ▶ Only OEM to offer optional RH under cab fuel tank option



FRONT AXLE AND EQUIPMENT



TerraStar's Axle-Forward Design and Short BBC

- ▶ Provides a more compact design and excellent weight transfer
- ▶ Set-forward axle affords plenty of clear frame space for post-production equipment
- ▶ Maximizes payload

I-Beam Front Axles

- ▶ Standard 6,000 lb. capacity
- ▶ Optional 7,000 lb. capacity
- ▶ Utilizes industry standard components with widely available parts and service

Additional TerraStar Advantages

- ▶ Standard parabolic taper leaf suspension has less inter-leaf friction and wear to improve ride and durability
- ▶ Front shocks are “tuned” to match specified suspension
- ▶ Front spring pins have maintenance free rubber bushings



BA	32.5"
Manufacturers' Capacities	Dana I-Beam 6,000 and 7,000 lbs.
Front Driving Axles Capacities	Available late 2011
Front Suspensions Capacities	Parabolic taper-leaf springs 6,000 and 7,000 lbs.
Power Steering	Sheppard MD83 power steering
Measured Wheel Cut (LH wheel, LH turn)	41°
LH curb-to-curb turning radius (with above wheel cut, 183" WB and 225/70R 19.5" tires)	28.2'
Brakes	TRW Four-wheel hydraulic disc, split system with 3-channel ABS

Ford  
F-450/550



37.5"
Dana 7,000 lbs.
7,000 lbs
Mono-beam axle, twin coil springs with shock absorbers and standard stabilizer bar 7,000 lbs.
Ford ZF with (w/steering damper)
45°
26.4'
Four-wheel hydraulic disc, with 3-channel ABS

Dodge  
4500/5500



38.7"
Not Published 7,000 lbs.
7,000 lbs.
Five link, coil suspension with shock absorbers and standard stabilizer bar 7,000 lbs.
TRW Power Steering
43°
27.3'
Four-wheel hydraulic disc, with 3-channel ABS. Foot activated mechanical parking brake, parking brake cable routing outboard of rail LH side.

Benefits

- ▶ TerraStar offers exceptional handling and maneuverability — perfect for urban settings and narrow job sites, reducing driver stress
- ▶ Set-forward axle provides excellent ride and plenty of clear frame space
- ▶ The commercially proven front end design offers a robust, stable platform and superior ride and handling
- ▶ Front axle/suspension is a standard design — familiar to technicians — ensuring predictable and efficient maintenance

## REAR AXLE AND EQUIPMENT

### Versatile Axles and Suspensions

TerraStar offers three-different axle capacities and standard Vari-Rate spring suspension.

#### Axles

- ▶ Axles capacities of 10,000, 11,000 and 13,500 lbs.
- ▶ Optional Dana Spicer Truetrac torque proportioning limited slip differential lock

### International® Vari-Rate Multileaf Suspension

- ▶ Designed for on-highway applications
- ▶ Single stage steel springs and torque leaves—with a variable deflection rate — offer excellent handling, stability and ride
- ▶ Optional shock absorbers available for added ride comfort

### International® Ride Optimized Suspension (IROS)\*

- ▶ Designed for on-highway applications
- ▶ Adjusts to different loads to maintain constant frame height
- ▶ Varying spring rate; softer with light loads, stiffer with heavy
- ▶ Excellent ride, handling and stability

\*IROS will become available for TerraStar beginning Spring, 2011

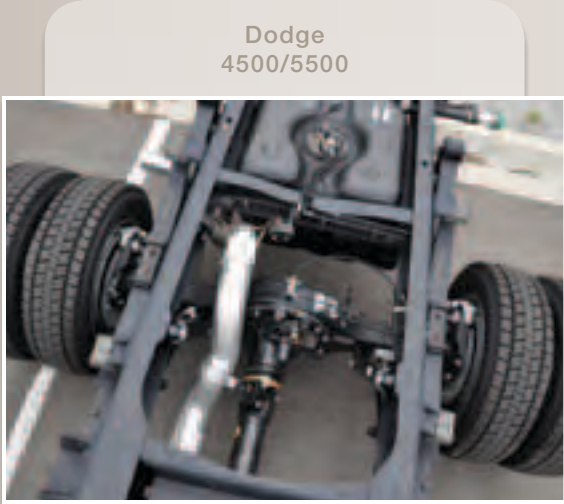


Available Configurations	4x2, 4x4**
GVWR Range	16,000 – 19,500 lbs.
Max GCWR	26,000 lbs.
Single Axles Capacity	Dana Spicer 10,000, 11,000 and 13,500 lbs.
Rear Axle Ratios	4.30, 4.56, 4.88, 5.38
Differential Lock	Available
Suspensions	International Vari-Rate, 4-spring Multileaf; optional shock absorbers
Air Ride Suspension	Optional International Ride Optimized Suspension (IROS)*

\*\* Available Fall 2011



Available Configurations	4x2, 4x4
GVWR Range	15,000 – 19,500 lbs.
Max GCWR	26,400 lbs.
Single Axles Capacity	Dana Spicer 12,000, 13,660 and 14,706 lbs.
Rear Axle Ratios	4.10, 4.30, 4.88
Differential Lock	Available
Suspensions	Single-stage leaf suspension with auxiliary spring; shock absorbers and sway bar
Air Ride Suspension	Not available



Available Configurations	4x2, 4x4
GVWR Range	15,000 – 19,500 lbs.
Max GCWR	26,000 lbs.
Single Axles Capacity	Dana Spicer 12,000, 13,500 lbs.
Rear Axle Ratios	4.10, 4.44, 4.88†
Differential Lock	Standard
Suspensions	Two-stage multi-leaf suspension with sway bar‡ and shock absorbers
Air Ride Suspension	Not available

† 4.10 standard ratio only available on 4500 with manual transmission; optional ratios available at an up-charge.

‡ 4500 suspension does not have sway bars

### Benefits

International Vari-Rate Multileaf Suspension

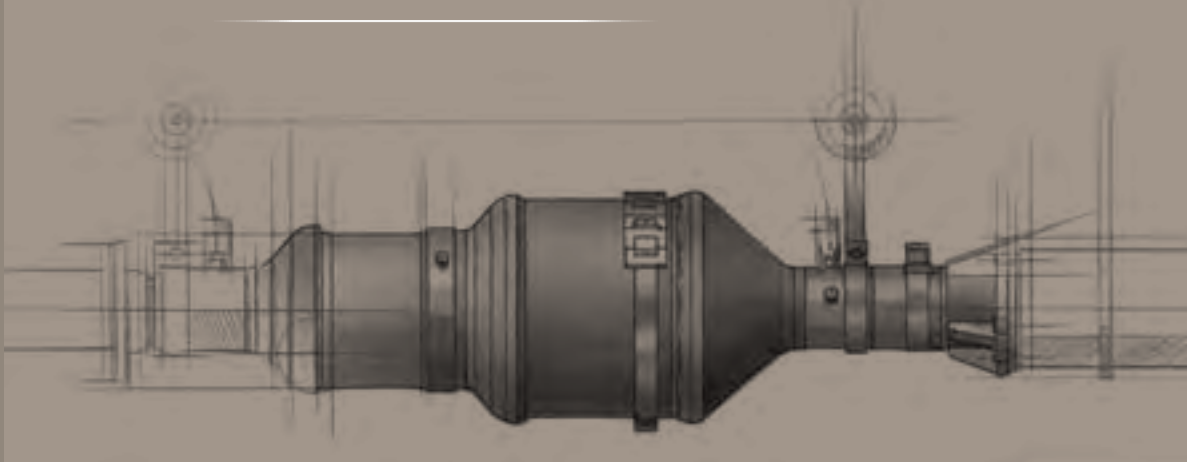
- ▶ Strong, durable and less complex than some competitive designs
- ▶ Provides both operational and maintenance peace of mind
- ▶ Potentially less maintenance cost compared to some competitive designs

International IROS

- ▶ Adjusts to different loads to maintain constant frame height
- ▶ Excellent ride, handling and stability
- ▶ Valuable option for customers with delicate loads
- ▶ Air-ride not offered by either of these competitors



EXHAUST SYSTEM



**TerraStar's exhaust system** provides the production flexibility to help keep post-production costs and upfitting time to a minimum.

**MaxxForce® Advanced EGR**

- ▶ A proven in-cylinder solution
- ▶ Business as usual for MaxxForce® owners 2010 and beyond

**Configuration**

- ▶ Horizontal system mounted under the frame
- ▶ Allows for a clean CA top of frame rails
- ▶ Space-saving, single-can configuration

**Design**

- ▶ Rubber isolators at all hanger brackets allow for engine/frame twist and operating temperature expansion
- ▶ No diesel exhaust fluid (DEF) tank required — freeing valuable frame space for greater upfitter flexibility
- ▶ Consistent and unvarying frame mounting — independent of wheelbase — while competitors have to install longer tailpipes dependant on wheelbase length
- ▶ Available inhibit regeneration switch to allow drivers to manually disable DPF regeneration in unsafe conditions

Exhaust System Configuration

Horizontal after treatment device (ATD) and tailpipe, located aft of regular cab with one size tailpipe facing down

Inhibit Regenration Switch

Available

Tailpipe Configuration

System mounting and tailpipe length is constant regardless of wheelbase.

Ford  
F-450/550



Horizontal exhaust system includes Selective Catalytic Reduction (SCR) system (urea injector and SCR catalyst housing) in addition to EGR Diesel Particulate Filter (DPF mounted aft of SCR system).

Not Available

Tailpipe routing over rear axle housing and pipe end after axle.  
NOTE: Tailpipe length will increase depending on wheelbase option.

Dodge  
4500/5500



Horizontal exhaust system includes SCR system (Urea injector and SCR catalyst housing) in addition to EGR Diesel Particulate Filter (SCR system mounted aft of DPF).

SCR system design includes LH under cab mounted urea tank, LH BOC urea pump, urea lines cross over driveline to RH side BOC mounted urea injector assembly

Not Available

Tailpipe routing over rear axle housing and pipe end after axle.  
NOTE: Tailpipe length will increase depending on wheelbase option

**Benefits**

- ▶ A refinement of the 2007 EGR system already in place ... and proven over 9 million miles
- ▶ Simple aftertreatment system is very similar to prior models — making life easier for technicians
- ▶ Not cluttered with the additional components required to support Liquid Urea Selective Catalytic Reduction aftertreatment design — common in competitive models
- ▶ Consistently unvarying frame mounting, independent of the wheelbase
- ▶ Depending on wheelbase length, many competitors require longer tailpipes

ELECTRICAL

Diamond Logic® Electrical System

Simplifies the integration of body builder equipment to the chassis electrical system. None of its competitors offer anything this comprehensive.

- ▶ Factory installed switches designed specifically for International's instrument panel
- ▶ Labels included with optional body integration switches
- ▶ Factory installed warning lights are incorporated in the gauge cluster
- ▶ Reduced Installation time — Centralized connections outside the cab
- ▶ Improved Quality — Eliminates the need to route wires into the cab or splice into chassis circuits
- ▶ Smart Diagnostics — Uses chassis diagnostic for integrated body equipment
- ▶ Remote Power Module — Serves as the gateway to the electrical system to control many different types of added equipment with additional software
- ▶ Software — Available to program custom body functions

State-of-the-art Multiplexing Technology

- ▶ The foundation — for linking functional areas of the vehicle
- ▶ Reduces wiring — by sending multiple electrical signals via a data link
- ▶ Electronic circuit modules and software performs vehicle functions instead of a complex wiring harness with electro-mechanical relays and switches



Electrical System Design

Factory-Installed Body Integration System and Components

Body Upfitter Switches

Electrical Fuse/Circuit Panel Location

Alternator Manufacturers

Amperage

Mounting

Batteries

Battery Disconnect

Jump-start Studs

Block Heaters

Multiplex wiring system

Diamond Logic® Applications Solutions. Body Builder wiring connection LH rail BOC or LH frame rail under cab (Extended or Crew)

Variety of available packages

Passenger dash panel

Leece-Neville

120, 185, 220, 320\* amps

Pad mounted

Up to 3; 1100, 1300, & 2250 CCA

Available cab-mounted lever operated switch

In battery box or remote-mounted outside of battery box

Available 1000 watt block heater with receptacle mounted below driver's door

\*Emergency Service

Ford  
F-450/550



Multiplex wiring

Standard body builder connections are located under hood and EOF

Standard upfitter switches located in instrument panel

In cab

Motorcraft

157 amp (gas), 200 amp (diesel)  
Optional 357† amps (ambulance)

Pad Mounted

Up to 2; 650 CCA or 1500 CCA

Not available

Not available

Available block Heater (standard in severe cold weather states)

† Dual Alternators

Dodge  
4500/5500



Standard Wiring

Standard upfitter connection under hood, lighting connections EOF

Four switches located in cab in center of dash console

Under Hood power distribution panel and maxi fuse panel

Mopar

180 or 220 amps

Pad mounted

Up to 2; 730 CCA or 1500 CCA

None

None

Standard engine block heater, no receptacle mounted on cab, optional cord can be ordered that can be routed through grill

Benefits

- ▶ TerraStar electrical system offers owners a superior value that helps make vehicle operation easier, vehicle maintenance simpler and overall service life longer
- ▶ Simpler multiplex wiring
- ▶ Easily accessible power distribution center
- ▶ Distinctive commercial grade features — like battery disconnect and remote jump start studs
- ▶ Many highly specialized options, which are factory available for the TerraStar — like headlight wig-wag — can be very expensive for the competition to install during the upfitting process



## POWERTRAIN

### MaxxForce® Advanced EGR

A sophisticated, in-cylinder solution meets EPA 2010 emissions standards using proprietary emissions technology.

- Simple: refined from 2007 EGR system
- Reliable: no urea tanks, additional catalysts, sensors, gauges or electronics
- Dependable: over 9 million miles of experience
- Cost-effective: stable and predictable residual value
- Turn-key: business as usual for our customers

### MaxxForce® 7 Engine

- Proprietary engine — designed and engineered for optimum performance within our vehicles
- Industry-leading performance, reliability and resale
- 300 HP and 660 lbs./ft. of torque

### Transmissions and Equipment

- Allison 1000 5-speed automatic transmission
- Allison available in highway, rugged duty and emergency vehicle application ratings
- Durable Allison automatics have a wide support infrastructure

### Serviceability

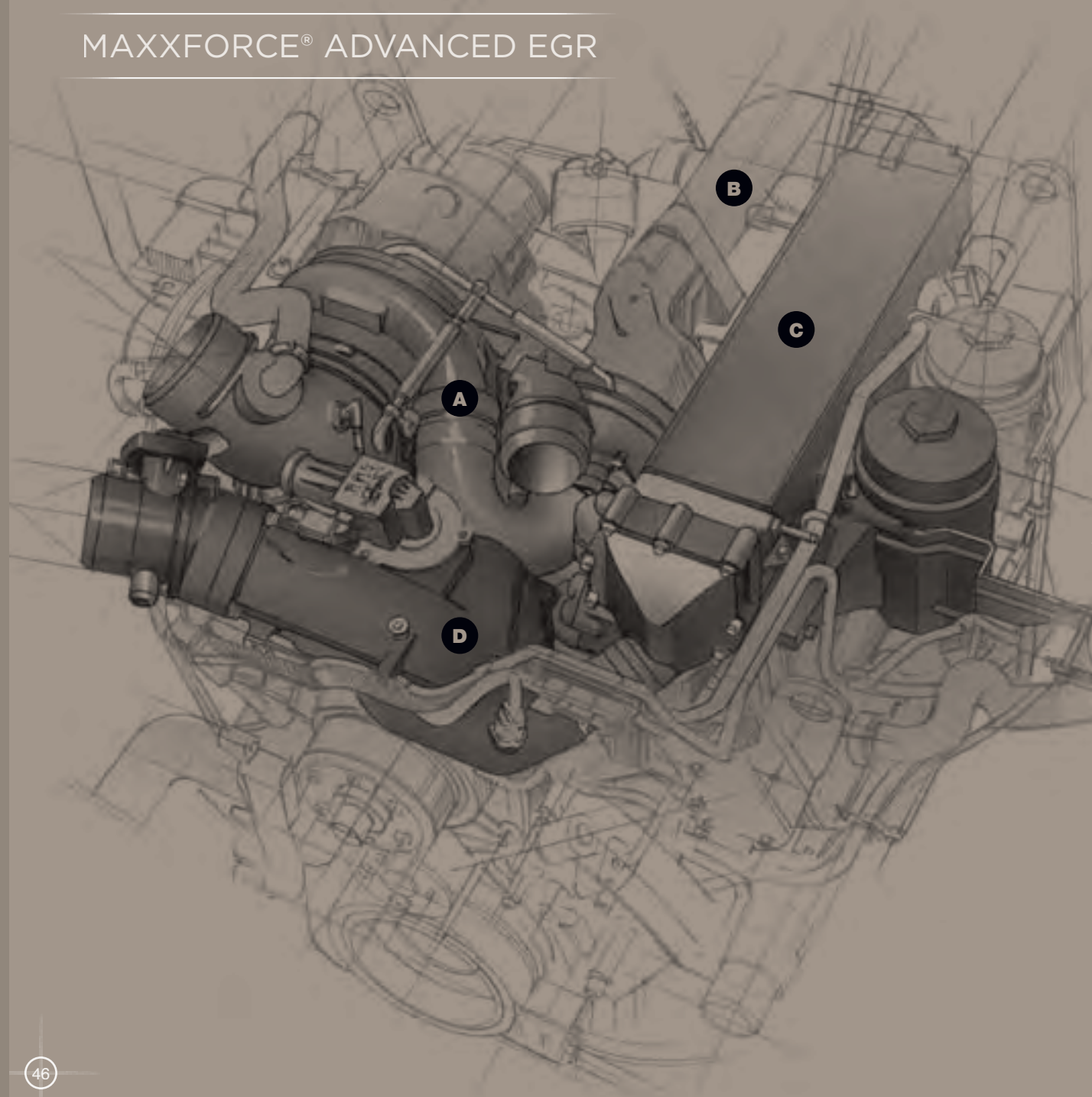
- Easy routine serviceability yields greater longevity
- Most routine service points located on driver's side
- Crucial fluids are easy to locate and read
- Adjustment-free valve train
- Many dependability-related features are standard



# MAXXFORCE



## MAXXFORCE® ADVANCED EGR



### 2010 Exhaust Gas Recirculation (EGR) System

- A.** Dual sequential turbocharger
- B.** Exhaust inlet manifold for turbocharger and EGR cooler
- C.** Single I-Flow EGR cooler
- D.** EGR mixing and distribution duct

## INTERNATIONAL® TRUCKS POWERED BY MAXXFORCE® ENGINES

Dedicated to no-hassle emissions solutions today and tomorrow, enabling customers to focus on their business.

### Smarter. Easier. Faster.

Presently, there are two competing systems designed to achieve the new 2010 EPA requirements:

- ▶ **Liquid Urea Selective Catalytic Reduction (SCR):** An after-treatment approach that utilizes liquid urea ... the solution most truck makers will incorporate
- ▶ **Advanced Exhaust Gas Recirculation (EGR):** A proven in-cylinder solution ... the customer preferred and International® solution

### MaxxForce® Advanced EGR

- ▶ International® Trucks, powered by MaxxForce® engines, utilize Advanced EGR — a refinement of the 2007 EGR system already in place ... and proven over 9 million miles.
- ▶ The same confidence customers have in today's MaxxForce® engines will carry forward into 2011 and beyond.

### MaxxForce® Advanced EGR Advantages

- ▶ Business as usual for MaxxForce® owners 2010 and beyond
- ▶ A simple, proven technology
- ▶ Simpler to maintain and operate than liquid urea SCR
- ▶ No radical hardware additions
- ▶ No liquid urea tanks, additional catalysts, sensors, gauges or electronics
- ▶ No additional exhaust after-treatment components for the body manufacturer to package equipment around during installation
- ▶ No additional fluids to understand, purchase or store
- ▶ No additional dash warning systems to monitor
- ▶ No worries about the availability of urea
- ▶ No additional driver training and technical training
- ▶ 200-300 lbs. lighter than liquid urea SCR
- ▶ Stable and predictable residual value



## ENGINE AND EQUIPMENT

**MaxxForce® 7** — true to International’s reputation — provides industry-leading performance, reliability, durability and resale value

**Advanced Air-Management System**

- ▶ Dual sequential turbochargers allow quick response at low speeds and peak power at higher speeds

**Compacted Graphite Iron Block (CGI)**

- ▶ Incredibly strong platform that handles the highest fuel pressures that deliver the best fuel combustion and reduces vibration and noise
- ▶ CGI properties allow for increased durability without the added weight as compared to typical gray iron

**High-Pressure Common-Rail Fuel System**

- ▶ Extremely efficient piezo injectors and high injection pressure allow for precise fuel dosing, injection timing and optimal combustion
- ▶ Better fuel economy, in-cylinder reduction of emissions and a quiet running diesel engine are all benefits



Engine Model	MaxxForce® 7
Configuration	V8
HP	300 @ 2,600 RPM
Torque	660 lbs.-ft. @ 1,600 RPM
EPA 2010	MaxxForce® Advanced EGR
Engine Brake	Not available
Engine Warranty	60-month
Radiators	Aluminum cross-flow 697 sq. in.
Designated engine hour meter available for PTO or accessories	Available PTO hour meter
In-dash PTD controls with programmable interlocks	Available through Diamond Logic®
Dial A/C compressors for ambulance or bus	Available
Engine driven air compressor	Available 13.2 CFM air compressor
Valve Adjustment	Not necessary

Ford  
F-450/550



Power Stroke 6.7
V8
300 @ 2,800 RPM
660 lbs.-ft. @ 1,600 RPM
SCR
Exhaust
60-month
Aluminum
828 sq. in. & 1,102 sq. in.
Not available
Not available
Not available
Not available
Hydraulic lash adjusters

Dodge  
4500/5500



Cummins ISB 6.7L
In-line 6
350 @ 2,900 RPM
610 lbs.-ft. @ 1,600 RPM
SCR
VGT Exhaust
60-month
Aluminum
Size is unpublished
Not available
Not available
Not available
Not available
Every 150,000 miles

Note: Max HP decreased for EPA 2010 Cummins engines

**Benefits**

- ▶ In-cylinder reduction of emissions
- ▶ One of the quietest running diesel engines in the industry
- ▶ All serviceable fuel system components are centrally located for ease of service
- ▶ 10% more torque than Cummins
- ▶ High pressure common-rail fuel system for precise fuel dosing, injection timing and optimal combustion
- ▶ Lower cost of operation over the life of the engine
- ▶ Excellent fuel efficiency



# TRANSMISSION AND EQUIPMENT

## TerraStar Offerings

- ▶ Allison: 1000 series of automatic transmissions with HS, EVS and RDS configurations


## Additional Equipment

- ▶ Available load-based shift schedule designed to optimize shifting and reduce mode selection decisions by the driver
- ▶ Standard T-bar type shifter
- ▶ Optional column-mounted shifter

## Body Builder Friendly

TerraStar simplifies the installation process and minimizes costs:


- ▶ Simplifies transmission wiring
- ▶ Transmission-shift inhibit for PTO applications to prevent accidental shifting during PTO or critical functions
- ▶ Torque convertor lock-up for maximum PTO efficiency






Automatic Transmissions	Allison 1000
Available Allison Vocational Codes	Standard: HS Optional: EVS, RDS
Available Speeds	5-speed
PTO Controls	Available dash-mounted PTO control
Available Transmission Shifter Configurations	Standard: T-bar type Optional: Column-mounted
External, Spin-on Replaceable Filter	Available
Transmission Range Inhibit	Available
Manual Transmissions	Not available
Types and Available Speeds	Not available

Ford  
F-450/550



Ford Torqshift®
Not applicable
6-speed
Available
Column-mounted only
Not available
Not available
Not available
Not available

Dodge  
4500/5500



Aisin
Not applicable
6-speed
Available
Column-mounted only
Not available
Not available
G-56 manual transmission (supplied by Mercedes-Benz)
6-speed

Benefits

- ▶ Offers the three most popular Allison transmission configurations available on the market
- ▶ Offers a proven commercial-grade transmission with one of the widest parts and service support structures in the nation
- ▶ Parts or service available at any International dealer, and at any authorized Allison repair facility
- ▶ Ford and Dodge use proprietary components — owners are forced to go to their respective dealer for assistance

SERVICEABILITY

Ease of Service

helps guarantee that important routine maintenance will become ... routine.

**TerraStar's routine service points** are easily located, making pre-trip inspections and routine maintenance easy.

- ▶ Crucial fluids are easily located
- ▶ Most fluid levels are simply determined through translucent reservoirs
- ▶ Engine oil and transmission fill points are easy to access

Standard Service Related Features

- ▶ Extended life engine coolant
- ▶ Fuel-Water Separator with Filter Restriction/Change Indicator and Water-in-Fuel Sensor
- ▶ High-temperature radiator hoses (-40°F – +300°F)
- ▶ Gates shrink-band type thermoplastic coolant hose clamps

Shrink-Band Benefits

- ▶ Maintain a consistent, dynamic tension, so they never need retightening
- ▶ Apply more uniform force around the fitting
- ▶ Maintain a higher percentage of force at low temperatures vs. metal clamps
- ▶ Joint fit and function improve with use, compared with others whose systems are only at their best when first installed



Engine Envelope

Open envelope allows easy access for pre-trip inspections and routine maintenance. Splash guards are easily removed

Driver Side Service Points

Engine oil check/fill  
Transmission fluid check/fill  
Coolant check/fill  
Washer fluid check/fill  
Brake Fluid check/fill

Passenger Side Service Points

Air cleaner filter minder  
Power steering check/fill

Clear Fluid Reservoirs

Coolant, power steering, brake fluid

Splash Shield Mounting

Driver: stationary  
Passenger: stationary

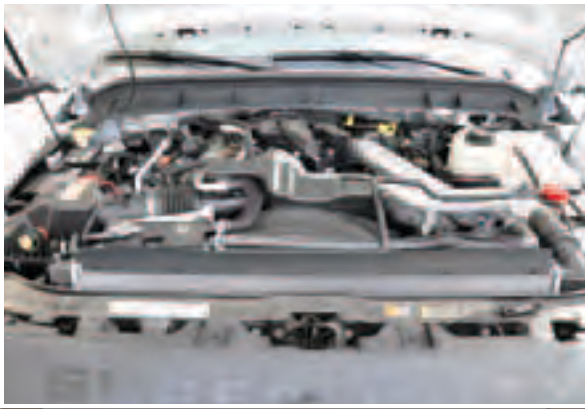
Hose Clamps

Thermoplastic shrink bands

On-Board Diagnostics and Controls

Diamond Logic® user screen in cab, ties into all component electronics, allows for quick diagnosis of electrical problems

Ford  
F-450/550



Very tight envelope. Permanent front fenders and wheel wells that make access to engine components more difficult\*

Engine oil check/fill  
Transmission fluid check/fill  
Coolant check/fill  
Brake Fluid check/fill

Air cleaner filter minder  
Washer fluid check/fill

Coolant, power steering, brake, washer

No splash shields, fenders and wheel wells integrated with cab

Simple spring-type hose clamps

LCD screen display includes menus for Gauge Setup, Trip Computer, Fuel Economy and Towing/Off-Road applications — no diagnostic troubleshooting available

\*Battery/batteries are installed under the hood in the engine compartment adding to the congestion

Dodge  
4500/5500



Tight envelope. Permanent front fenders and wheel wells that make access to engine components more difficult\*

Washer fluid check/fill  
Power steering check/fill  
Engine oil check/fill  
Transmission fluid check/fill

Air cleaner  
Coolant check/fill

Coolant, power steering

No splash shields, fenders and wheel wells integrated with cab

Simple spring-type hose clamps

Electronic Vehicle Information Center (EVIC), located in the middle of the instrument cluster, offers data on standard vehicle functions — no diagnostic troubleshooting available

\*Battery/batteries are installed under the hood in the engine compartment adding to the congestion

Benefits

- ▶ Easy access to all check and fill points
- ▶ Easy access to engine and front end components
- ▶ Faster maintenance and repair time
- ▶ Lower maintenance costs over the life of the vehicle



CUSTOMER SUPPORT

**OnCommand™** provides customers with a unique group of business tools that helps them manage their operations better — keeping their trucks on the road.

**OnCommand™ Knowledge**

- ▶ **Service:** Web-based service manuals, letters, circuit diagrams and VIN-specific data
- ▶ **Parts:** Web, print, or CD-based parts catalog with detailed illustrations and optional electronic ordering

**OnCommand™ Education**

- ▶ Web-based vehicle and systems training courses for self-maintainers

**OnCommand™ Control**

- ▶ **Repair Advocate** — Integrated fleet repair management system
- ▶ **Service Partner** — Dealer-provided maintenance and repairs providing expedited service to customers
- ▶ **Fleet Charge** — Parts purchasing program
- ▶ **Maintenance and Inventory Management** — software solution for self-maintaining fleets and independent garages
- ▶ **Parts Return Program** – Surplus, unused and obsolete parts return for full cash value payout



Service Information

OnCommand™ Service Information  
(Formerly Fleet ISIS®)

Parts Information

OnCommand™ Parts Information  
(Formerly Fleet Parts Catalog  
Online and Custom Parts Catalogs)

Purchasing Card for  
Parts and Service

OnCommand™ Fleet Charge®

Network-Wide  
Consistent Price  
Preventative Maintenance

OnCommand™ Preventive  
Maintenance (Formerly  
Performance PM®)

Roadside Break Down  
Management

OnCommand™ Repair Advocate / EBS

Obsolete Parts  
Return Program

OnCommand™ Parts Return Program  
(Formerly CPR / GPRP)

Education Solutions

OnCommand™ Education

Labor Time Consistency

OnCommand™ Service Partner

Parts Inventory  
Management

OnCommand™ Maintenance and  
Inventory Management (Formerly  
Diamond Connection® Solutions)

Rapid Repair Assessment

Accelerated Service –  
Express Diagnostics



Ford

Quality Fleet Care – Commercial  
Service Plus – Maintenance  
Management program

Direct order entry system (DOESIII)  
– Direct order (DOW) application for  
Customers

Quality Fleet Care – Parts Billing  
program

Quality Fleet Care – Commercial  
Service Plus

Quality Fleet Care – Emergency  
Roadside Assistance

Parts Assistance Center Online – Parts  
Purge for dealers to return unusable  
parts.(no info on obsolete Parts)

Standardized training and resource  
center (STARS) dealers only

Ford – Professional Technician  
Society – Service Labor Time  
Standards dealers only

Quality Fleet Care – Commercial  
Service Plus – Maintenance  
Management program

Quality Fleet Care – Quick Lane Service  
centers

Dodge

Vehicle use tracking as part of  
BusinessLink® program for commercial  
truck maintenance and repair

Some programs and information  
available through Mopar

Accounts available at the dealer level  
only.

Customizable service contracts  
available.

BusinessLink® offers 24-hour towing,  
loaner vehicles (on select vehicles)  
and free shuttle service. A dedicated  
account manager is also assigned to  
each BusinessLink® customer.

Nothing published

Dodge offers some video instruction on  
a DVD included in new vehicle delivery  
paperwork

Nothing published

Vehicle use tracking as part of  
BusinessLink® program for commercial  
truck maintenance and parts use

Next-Bay-Up-Service insures  
preferential scheduling at service  
departments

Benefits

- ▶ International offers TerraStar owners a wider variety of support tools that will make keeping track of maintenance and repair costs easier, simpler and less stressful
- ▶ Online materials are available 24-hours a day, and are—in most cases—specific to the VIN(s) of the vehicle(s) in the customer's fleet, making it extremely easy to track down specific questions and needs on parts and maintenance
- ▶ Self-maintaining fleets will find the inventory management and service information sites to be tremendously valuable in keeping repair and diagnostic times manageable as well as keeping parts inventories simple and less capital-intensive



## ENGINEERED FOR WHAT MATTERS MOST

### Performance

- ▶ A high-strength, low alloy steel variable depth huck-bolted frame with 80,000 PSI yield strength offers the strongest, most durable frame in Class 4/5
- ▶ Standard outer C-Channel reinforcement at the frame transition area for added strength
- ▶ Only OEM in its class to offer a bolt-on front bumper extension

### MaxxForce® Power

- ▶ Proprietary MaxxForce® 7 diesel engine offering 300 HP and 660 lbs.-ft. of torque
- ▶ Advanced EGR: meets EPA 2010 emissions standards using proven, proprietary emissions technology

### Driver Satisfaction

- ▶ Largest cab in its class
- ▶ Best-in-class visibility: a 75° hood slope
- ▶ Smooth and easy entry and egress
- ▶ Amenities—from a high-output HVAC to overhead storage and numerous seat options—enhance driver comfort

### Diamond Logic® Electrical System

- ▶ Pre-programmed features include pre-trip inspections, headlights on with wipers, and safety interlocks
- ▶ Increases reliability and uptime ... reduces repair costs

### Cost of Ownership

- ▶ Gear top rail CA ensures efficient upfitting and helps minimize post-production costs
- ▶ Center dash panels accommodate banks of auxiliary switches for a more seamless integration of aftermarket controls
- ▶ Easy-tilt hood improves serviceability and makes routine service easier
- ▶ Extended/synchronized service intervals keep your truck on the road, out of the shop







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## COMPETITIVE COMPARISON GUIDE: LIGHT DUTY

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A **NAVISTAR** COMPANY