

# Towing Targets Setting and Features

25.06.2023

Airstream Rally Rock Springs, WY

The Ford logo, rendered in its signature blue script font.

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# Introduction - Background

**Name:** Bobby Keith (Indianapolis, IN)

**Education:** Tuskegee University

Wayne State University

## Years at Ford: 27

- Started in testing – Performance /FMVSS / Develop Wind Tunnel Test Facility
- Transmission Shift Quality – Focus In Truck - E-Series / F-150/ Super Duty (CDL – Towing)
- NVH (Noise / Vibration / Harness)
- Vehicle Integration - 18.5MY F150 3.0L Diesel
- Off-Road & Trailer Tow

# Towing Experience

- Started in Transmission Shift Quality – to help resolve issues with transmission shifting with trailers
- Receive (CDL) Commercial Driver License 2005
- Worked on a lot of Ford trailer driving dynamics issues (Buck / Jerk / Vibration & Shake)
- Lead trailer features and towing capacity target setting for Super Duty & Medium Duty truck (Help out on other truck program - Core Support)
- Manage 95% Trailer Fleet at Ford
- Supported Social Media Video(Towing Tips, Tools and Tech: A Ford Towing Video Guide | Ford)

# Towing Tips, Tools and Tech: A Ford Towing Video Guide



<https://www.youtube.com/watch?v=hiUvCYI5x5I&t=2347s>

# Standard to establish OEM Towing Agreement

Ford was on the panel to help establish an agreement around tow standards around towing target (Notice that tow rating from some Brands were not align to meet some of the standard road grades)

- Design to standardize towing claims regarding rating between the different OEM's
- Worked with SAE (Society of Automotive Engineers) to create SAE J2807
- These standards are there for advertisement standards (Commercial tow claims - Fine print meet SAE-J2807 standard. This help give consistency when customers are crossing different Brands)

# Towing Requirements SAE-J2807

- Connection Type (Hitch)
  - Conventional
  - 5<sup>th</sup> Wheel
  - Goose Neck
- Towing Standard base on weight category
- Trailer Dimension (Frontal area)
- Length
- Wheel / Tire Size
- # Axle





# Standard Trailer Requirements – Summary Chart

	Trailer Type	TWR Requirement	Axle(s)	Maximum Effective Tongue Length	Tire Brand/Size/ Pressure	Minimum Frontal Area
A	Conventional	≤454 kg (1000 lb)	Single	2.1 m (83 in)	Goodyear Marathon Radial ST175/80R13C 345 kPa (50 psi) or Duro Bias ST175/80D13C 345 kPa (50 psi)	1.11 m <sup>2</sup> (12 ft <sup>2</sup> )
B	Conventional	≤907 kg (2000 lb)	Single	2.7 m (106 in)	Goodyear Marathon Radial ST205/75R15C 345 kPa (50 psi)	1.86 m <sup>2</sup> (20 ft <sup>2</sup> )
C	Conventional	≤1588 kg (3500 lb)	Single	2.7 m (106 in)	Goodyear Marathon Radial ST205/75R15C 345 kPa (50 psi)	2.79 m <sup>2</sup> (30 ft <sup>2</sup> )
D	Conventional	≤2268 kg (5000 lb)	Tandem	4.2 m (165 in)	Goodyear Marathon Radial ST205/75R15C 345 kPa (50 psi)	3.72 m <sup>2</sup> (40 ft <sup>2</sup> )
E	Conventional	≤3493 kg (7700 lb)	Tandem	4.2 m (165 in)	Goodyear Marathon Radial ST205/75R15C 345 kPa (50 psi)	5.11 m <sup>2</sup> (55 ft <sup>2</sup> )
F	Conventional	≤4536 kg (10 000 lb)	Tandem	5.0 m (196 in)	Goodyear Marathon Radial ST225/75R15D 540 kPa (65 psi)	5.57 m <sup>2</sup> (60 ft <sup>2</sup> )
G	Conventional	≤5897 kg (13 000 lb)	Tandem	5.7 m (224 in)	Goodyear Marathon Radial ST235/80R16D 540 kPa (65 psi)	5.57 m <sup>2</sup> (60 ft <sup>2</sup> )
H	Conventional	≤7983 kg (17 600 lb)	Tandem/Triple	6.55 m (258 in)	Goodyear G114 Unisteel 215/75R17.5H 865 kPa (125 psi)	5.57 m <sup>2</sup> (60 ft <sup>2</sup> )
J	Fifth Wheel or Gooseneck	≤10886 kg (24 000 lb)	Tandem/Triple	10.7 m (420 in)	Commensurate with trailer Gross Axle Weight Rating (GAWR)	6.97 m <sup>2</sup> (75 ft <sup>2</sup> )
K	Conventional	≤10886 kg (24 000 lb)	Triple	6.4 m (252 in)	Goodyear G114 Unisteel 215/75R17.5H 865 kPa (125 psi)	5.57 m <sup>2</sup> (60 ft <sup>2</sup> )
L	Fifth Wheel or Gooseneck	>10886 kg (24 000 lb)	Tandem/Triple	10.7 m (420 in)	Commensurate with trailer Gross Axle Weight Rating (GAWR)	Not specified



	Performance Attribute	Performance Metric	Requirement
<b>SAE J2638</b> - Fifth Wheel and Gooseneck Attachment Performance up to 13,608/kg (30,000/lb.) Trailer GVW	Tow Vehicle Structural Strength (fifth wheel hitch)	Ability to withstand load	React load for minimum of 5 s
	Tow Vehicle Structural Strength (gooseneck hitch)	Ability to withstand load	React load for minimum of 5 s
	Tow Vehicle Structural Strength (fifth wheel hitch)	Ability to attain loads throughout test	No loss of attachment; react loads throughout test
	Tow Vehicle Structural Strength (gooseneck hitch)	Ability to attain loads throughout test	No loss of attachment; react loads throughout test
<b>SAE J684</b> -Trailer Couplings, Hitches, and Safety Chains	Tow Vehicle Structural Strength (Conventional Trailer)	Angular Deformation	5 degree permanent deformation in any direction
<b>SAE J1491</b> -Vehicle Acceleration Measurement	Level Road Acceleration	0 to 96.6 km/h (0 to 60 mph)	30.0 s (single rear wheel tow-vehicles); 35.0 s (dual rear wheel tow-vehicles)
	Level Road Acceleration	0 to 48.3 km/h (0 to 30 mph) Interval	12.0 s (single rear wheel tow-vehicles); 14.0 s (dual rear wheel tow-vehicles)
	Level Road Acceleration	64.4 to 96.6 km/h (40 to 60 mph) Interval	18.0 s (single rear wheel tow-vehicles); 21.0 s (dual rear wheel tow-vehicles)
<b>SAE J266</b> -Steady State Directional Control Test Procedures for Passenger Cars and Light Trucks	Tow-Vehicle Understeer	Understeer for $0.1 g \leq$ Lateral acceleration $\leq 0.3 g$	$>0$ degrees/g
<b>SAE J2664</b> -Trailer Sway Response Test Procedure	Trailer Sway Response	Trailer Sway Damping Ratio	$\geq 0.10$ at 100 km/h (62.1 mph)

# Tow Vehicle Propulsion Requirements

- Level Road
- Launch on Grade
- Highway Gradeability



# Tow Vehicle Propulsion - Level Road

## Single Rear Wheel

- 0-60 mph – 30 Sec
- 0-30 mph – 12 Sec
- 40-60 mph – 18 Sec



## Dual Rear Wheel

- 0-60 mph – 35 Sec
- 0-30 mph – 14 Sec
- 40-60 mph – 21 Sec





# Tow Vehicle Propulsion – Launch on Grade

## 12% Grade - Forward & Reverse Direction

- 5 vehicle launches
- 16 ft
- 5 minutes



# Tow Vehicle Propulsion – Highway Gradeability

Highway Gradeability – How well the tow vehicle perform on the grade ( 6% - 7%)

Davis Dam - State Route 68 between Las Vegas and the Hoover Dam

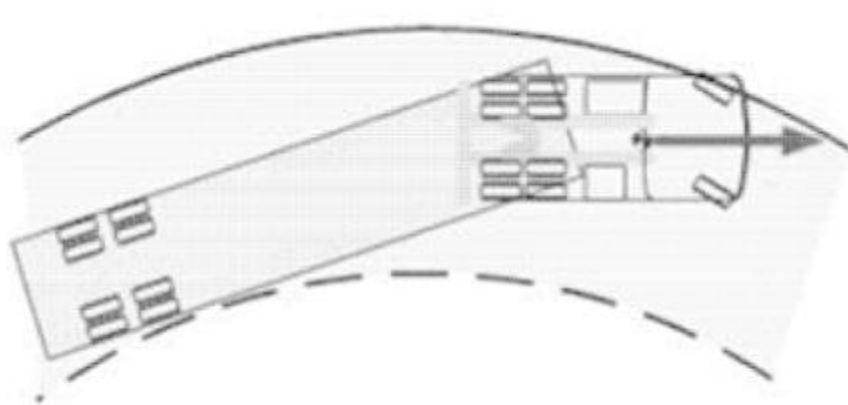
- Minimum Speed on Grade
  - Single Rear Wheel - 40 mph
  - Dual Rear Wheel - 35 mph
- Drivetrain Performance
  - No component failure
  - No diagnostic codes that alert driver
  - No customer warnings
- Cooling Performance
  - No component failure
  - No diagnostic codes that alert driver
  - No customer warnings



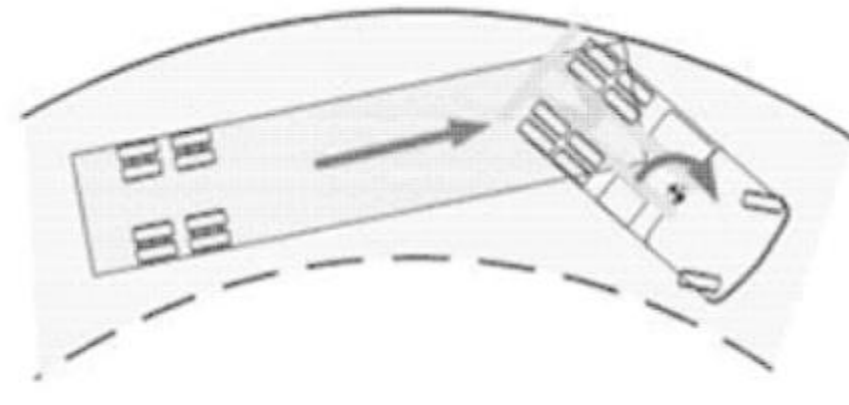
# Tow Vehicle Understeer

Understeer is an undesirable behavior that occurs when a vehicle turns less than is desired when a corner is being taken with a trailer under certain load.

Metric: Understeer for  $0.1 \text{ g} \leq \text{Lateral acceleration} \leq 0.3 \text{ g}$



Understeering ("Plowing Out")



Oversteering ("Spinning Out")



# Tow Vehicle Sway Response

Standard procedure for measuring and analyzing the sway response of a trailer when attached to a particular vehicle under specific loading and operating conditions.

Metric:  $\geq 0.10$  at 100 km/h

	Model	GVWR	Axle(s)	Effective Tongue Length	Tire Brand/Size/ Pressure	Frontal Area*
A	TC461-FB	454 kg (1000 lb)	Single	2.0 m (80 in)	Duro Bias ST175/80D13C 345 kPa (50 psi)	N/A— Flatbed
B/C	SW8	1746 kg (3850 lb)	Single	2.6 m (102 in)	Goodyear Marathon Radial ST205/75R15C 345 kPa (50 psi)	2.90 m <sup>2</sup> (31 ft <sup>2</sup> )
D/E	TW162	3492 kg (7700 lb)	Tandem	4.1 m (162 in)	Goodyear Marathon Radial ST205/75R15C 345 kPa (50 psi)	3.73 m <sup>2</sup> (40 ft <sup>2</sup> )
F	EW2024	4536 kg (10 000 lb)	Tandem	4.9 m (191 in)	Goodyear Marathon Radial ST225/75R15D 540 kPa (65 psi)	5.79 m <sup>2</sup> (62 ft <sup>2</sup> )
G	EW2425	5987 kg (13 200 lb)	Tandem	5.6 m (220 in)	Goodyear Marathon Radial ST235/80R16D 540 kPa (65 psi)	5.81 m <sup>2</sup> (63 ft <sup>2</sup> )
H	EW2427	7983 kg (17 600 lb)	Tandem	5.6 m (220 in)	Goodyear G114 Unisteel 215/75R17.5H 865 kPa (125 psi)	5.81 m <sup>2</sup> (63 ft <sup>2</sup> )
J	CVG3225W + 2' HT	6667 kg (14 700 lb)	Tandem	6.71 m (264 in)	Goodyear Marathon Radial ST235/80R16D 540 kPa (65 psi)	7.33 m <sup>2</sup> (78 ft <sup>2</sup> )
	CVG3227W + 2' HT	9072 kg (20 000 lb)			Goodyear G114 Unisteel 215/75R17.5H 865 kPa (125 psi)	
K	EW2839	10886 kg (24 000 lb)	Triple	6.5 m (256 in)	Goodyear G114 Unisteel 215/75R17.5H 865 kPa (125 psi)	5.81 m <sup>2</sup> (63 ft <sup>2</sup> )
L	Towmaster T-30	17370 kg (38 300 lb)	Tandem (4 tires per axle)	6.7 m (264 in)	Goodyear G114 Unisteel 215/75R17.5H 865 kPa (125 psi)	





# Tow Vehicle Brake Performance

Performance Attribute	Performance Metric	Requirement	Test Procedure
Combination Stability	Deviation within lane	Remain within 3.5 m (11.5 ft) lane throughout stop	FMVSS 105, Sec 7.5(b) or FMVSS 135, Sec 7.5, modified in 4.5.2 and 4.5.4
Combination Stopping Distance	Stopping distance, 32.2 to 0 km/h (20 to 0 mph) for TWR $\leq$ 1361 kg (3000 lb)	$\leq$ 10.7 m (35 ft) except; $\leq$ 13.7 m (45 ft) at any TWR above the tow-vehicle's unbraked TWR	FMVSS 105 or 135, modified in 4.5.2 through 4.5.4
Combination Stopping Distance	Stopping distance, 32.2 to 0 km/h (20 to 0 mph) for TWR $>$ 1361 kg (3000 lb)	$\leq$ 24.4 m, (80 ft)	FMVSS 105 or 135, modified in 4.5.2 through 4.5.4
Park Brake Performance	Hold on grade	12% grade (upward and downward) at GCWR	ECE R13H, Annex 3, Section 2.3, modified in 4.5.2 and 4.5.5

# Vehicle Towing Capacity Values

- New Vehicle Purchase
  - Dealership Tools
  - RV Towing Guide (<https://www.fleet.ford.com/towing-guides/>)
  - Monroney Label (Window Sticker)
- Vehicle Door Labels
- Towing Calculator (<https://www.ford.com/support/towing-calculator>)

# RV Towing Guide (Max Level for vehicle Configuration)



## RV & Trailer Towing Guides

Ford RV and trailer towing products continue to provide reliability and performance. Whatever your towing need is, there is a Ford vehicle or chassis to fill it. Download this year's towing guide to learn more about the different trailer weights and towing packages we currently offer.

[2023 Ford Towing Guide](#)  
[2022 Ford Towing Guide](#)  
[2021 Ford Towing Guide](#)  
[2020 Ford Towing Guide](#)  
[2019 Ford Towing Guide](#)

[2023 Lincoln Towing Guide](#)  
[2022 Lincoln Towing Guide](#)  
[2021 Lincoln Towing Guide](#)  
[2020 Lincoln Towing Guide](#)  
[2019 Lincoln Towing Guide](#)

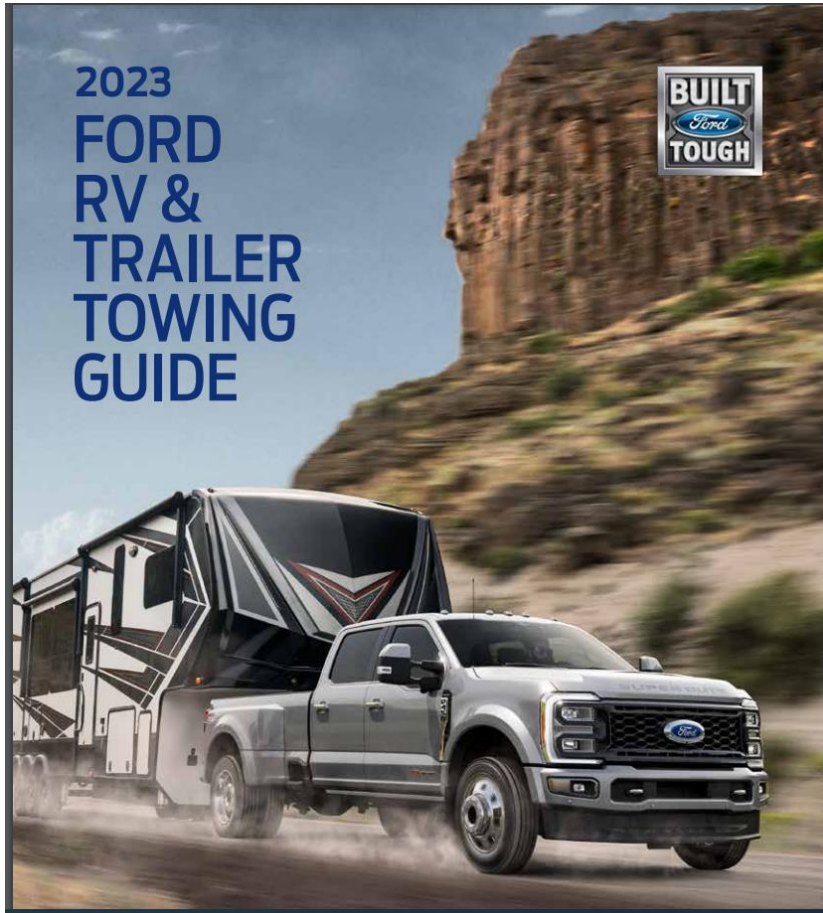
[2008 Towing Guide](#)  
[2007 Towing Guide](#)  
[2006 Towing Guide](#)  
[2005 Towing Guide](#)  
[2004 Towing Guide](#)

[2013 Towing Guide](#)  
[2012 Towing Guide](#)  
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[2009 Towing Guide](#)

[2018 Towing Guide](#)  
[2017 Towing Guide](#)  
[2016 Towing Guide](#)  
[2015 Towing Guide](#)  
[2014 Towing Guide](#)

Website has list of RV Towing Guides for various past years

# RV Towing Guide (Example Chart)



F-250 Tremor® Crew Cab in Stone Gray Metallic. Preproduction image shown. The all-new Ford F-Series Super Duty goes on sale in early 2023 with some features and trim series available starting in spring 2023.

## F-250 SRW SUPER DUTY® PICKUP

### CONVENTIONAL TOWING – MAXIMUM LOADED TRAILER WEIGHT (lbs.)

#### TRAILER TOWING SELECTOR

Towing capability will be reduced based on trim series, option content and payload. Prior to making final vehicle selection, reference the Towing Basics information on the last page. See dealer and reference "eSourceBook" Job Aid "Spec'ing F-Series Trucks for Towing".

Automatic Transmission			REGULAR CAB				SUPERCAB				CREW CAB			
Engine	Axle Ratio	GCWR (lbs.)	4x2 141.6" WB 8' Box	4x4 141.6" WB 8' Box	4x2 148.0" WB 6-3/4' Box	4x2 164.2" WB 8' Box	4x4 148.0" WB 6-3/4' Box	4x4 164.2" WB 8' Box	4x2 159.8" WB 6-3/4' Box	4x2 176.0" WB 8' Box	4x4 159.8" WB 6-3/4' Box	4x4 176.0" WB 8' Box		
6.7L V8 Turbo Diesel	3.31	23,500	16,600	16,200	16,300	16,200	15,900	15,800	16,200	15,900	15,800	15,500		
		30,000 <sup>1</sup>	18,200	20,000	18,200	19,500	20,000	22,000	19,500	19,500	22,000	21,900		
	3.55	30,000 <sup>1</sup>	18,200	20,000	18,200	19,500	20,000	22,000	19,500	19,500	22,000	21,900		
6.7L V8 H.O. Turbo Diesel	3.55E <sup>2</sup>	28,300 <sup>3</sup>									18,200			
	3.31	31,000 <sup>3</sup>	18,200	20,000	18,200	19,500	20,000	22,000	19,500	19,500	22,000	22,000		
	3.55	31,000 <sup>3</sup>	18,200	20,000	18,200	19,500	20,000	22,000	19,500	19,500	22,000	22,000		
6.8L V8	3.73	21,000	14,800	14,400	14,500	14,400	14,100	14,000	14,500	14,300	14,100	13,800		
	4.30	23,500	17,300	16,900	17,000	16,900	16,600	16,500	17,000	16,800	16,600	16,300		
7.3L V8	3.55	23,500	17,200	16,800	17,000	16,800	16,500	16,400	16,900	16,700	16,600	16,200		
	3.73E <sup>2</sup>	24,600	18,200	17,900	18,100	17,900	17,600	17,500	18,000	17,800	17,700	17,300		
	4.30	26,000	18,200	18,200	18,200	18,200	18,200	18,200	18,200	18,200	18,200	18,200		

- Requires F-250 High-Capacity Axle Upgrade Package (535).
- 3.55E and 3.73E are electronic locking rear axles.
- Tremor® Off-Road Package (17Y).

- Notes:**
- Combined weight of vehicle and trailer cannot exceed listed GCWR.
  - Do not exceed the Maximum Loaded Trailer Weight listed.
  - Conventional trailer tongue load weight should be 10% (15% for 5th-wheel and gooseneck towing) of total loaded trailer weight. **Make sure vehicle payload (reduce by option weight) will accommodate trailer tongue (trailer king pin for 5th-wheel towing) load weight and weight of passengers and cargo added to towing vehicle.** Addition of trailer tongue (trailer king pin for 5th-wheel towing) load weight and weight of passengers and cargo must not cause vehicle weights to exceed rear GAWR or GVWR. These ratings can be found on the vehicle Safety Compliance Certification Label.
  - Calculated with SAE J2807<sup>®</sup> method.
  - Trailer towing values are the same for weight-carrying and weight-distributing hitches.
  - If using load bars for weight distribution, Ford recommends 50% front axle load rest (FALR).

RV Towing Guide provide max towing for general vehicle configuration low trim series vehicle.

# RV Towing Guide (Manual Calculator)

## TRAILER TOWING CAPABILITY CALCULATOR

Use this worksheet when recommending a truck that's in stock. This worksheet calculates several fields automatically. Just input the requested values and print the results. (Hover over underlined terms for a definition.)

### Step 1: Ask about what's being towed.

- Remember to include everything that goes on/in the trailer
- Select conventional or 5th-wheel/gooseneck. This will affect tongue weight below

### Calculate Total Trailer Weight

- A** Unloaded Trailer Weight:  0 lbs.
- B** Trailer Contents Weight:  0 lbs.
- Total Trailer Weight:  0 lbs.
- Conventional Hitch?
- 5th-Wheel/Gooseneck Hitch?

### Step 2: Ask about what's being carried.

- Remember to include everything that goes in the truck. **NOTE:** Tongue weight and hitch weight are part of payload weight
- If you're only calculating payload, only complete Step 2 and Step 3
- If answer to question is "No" then select a truck with larger Max. Payload Rating

### Calculate Payload Weight

- C** Cargo Weight:  0 lbs.
- D** People Weight:  0 lbs.
- Trailer Tongue Weight:  0 lbs.
- E** Hitch Weight:  0 lbs.
- Total Expected Payload:  0 lbs.
- F** Max. Payload Rating:  0 lbs.
- Is Expected Payload **LESS** than Max. Payload Rating?  Yes  No

### Step 3: Determine if the truck's Gross Vehicle Weight Rating (GVWR) is large enough.

- Input GVWR from truck door label
- If answer to question is "No" then select a truck with a larger GVWR

### Calculate GVW

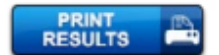
- G** GVWR:  0 lbs.
- As-built Curb Weight:  0 lbs.
- Total Expected Payload:  0 lbs.
- GVW:  0 lbs.
- Is GVW **LESS** than GVWR?  Yes  No

### Step 4: Determine if the truck's Gross Combination Weight Rating (GCWR) is large enough.

- If answer to question is "No" then select a truck with a larger GCWR

### Calculate GCW

- GVW:  0 lbs.
- Subtract Tongue Weight:  0 lbs.
- Adjusted GVW:  0 lbs.
- Total Trailer Weight:  0 lbs.
- GCW:  0 lbs.
- H** GCWR:  0 lbs.
- Is GCW **LESS** than GCWR?  Yes  No




Select Page 2 from Print menu.



# Monroney Label (Window Sticker) More Specific per Vehicle

KTP-000444 MI 4-REBILL, NB, 000444, PC292 46640
CERT CERT CERT TRD RAMP BUMF CAMP BOOK EXFL ROTA
012973 244/1468 1FT8W2BTX PEC22451 NB DEPL



ford.com

VEHICLE DESCRIPTION

## SUPER DUTY

2023 F250 SRW 4X4 CREW CAB LARIAT 160" WB STYLESIDE 6.7L POWER STROKE V8 DIESEL 10-SPEED AUTO TORQSHIFT

EXTERIOR OXFORD WHITE

INTERIOR BLACK ONYX LEATHER

PE C22451


**California Air Resources Board** Diesel Vehicle

### Environmental Performance

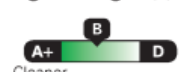
These ratings are not directly comparable to the U.S. EPA/DOT light-duty vehicle label ratings. For information on how to compare, please see [www.arb.ca.gov/ep\\_label](http://www.arb.ca.gov/ep_label).

Protect the environment. Choose vehicles with **higher ratings**:


**Greenhouse Gas Rating** (tailpipe only)



**Smog Rating** (tailpipe only)



Vehicle emissions are a primary contributor to climate change and smog. Ratings are determined by the California Air Resources Board based on this vehicle's measured emissions.



INCLUDED ON THIS VEHICLE	(MSRP)
<b>OPTIONAL EQUIPMENT/OTHER</b>	
PREFERRED EQUIPMENT PKG.608A	9,995.00
6.7L POWER STROKE V8 DIESEL	NO CHARGE
10-SPEED AUTO TORQSHIFT	430.00
3.31 ELECTRONIC-LOCKING AXLE	130.00
ALL WEATHER MATS W/O CARPET MAT	1,240.00
CHROME PACKAGE	
.LT275/65R20E BSW ALL-TERRAIN	
.CHROME PVD ALUMINUM WHEELS-20	
FX4 OFF-ROAD PACKAGE	495.00
.SKID PLATES	
11100# GVWR PACKAGE	250.00
RAPID HEAT SUPPLEMENTAL HEATER	NO CHARGE
50 STATE EMISSIONS	550.00
5TH WHEEL HITCH PREP PACKAGE	1,130.00
HIGH CAPACITY TRAILER TOW PKG JACK	
410 AMP ALTERNATOR	NO CHARGE
TOUGH BED SPRAY IN BEDLINER	595.00
DUAL BATTERY	NO CHARGE
360-DEGREE CAMERA PACKAGE	NO CHARGE
LEATHER 40/CONSOLE/40 SEAT	NO CHARGE
LARIAT ULTIMATE PACKAGE	5,075.00
.POWER RUNNING BOARDS	
.TOW TECHNOLOGY PACKAGE	
.UPFITTER SWITCHES	
.TAILGATE STEP	


PRICE INFORMATION	(MSRP)
BASE PRICE	\$83,740.00
TOTAL OPTIONS/OTHER	19,890.00
TOTAL VEHICLE & OPTIONS/OTHER	83,630.00
DESTINATION & DELIVERY	1,895.00

	RAMP ONE		
	<b>CM1K</b>		<b>TOTAL MSRP \$85,525.00</b>
	RAMP TWO	<b>CONVOY</b>	
		ITEM #: <b>48-465B O/T Z</b>	


Whether you decide to lease or finance your vehicle, you'll find the choices that are right for you. See your dealer for details or visit [www.ford.com/finance](http://www.ford.com/finance).

**SPECIAL ORDER**  
PC292 R RB X 335 000444 03 29 23

1FT8W2BTXPEC22451



and prevent operation of connected features. Connected service excludes Wi-Fi hotspot.




**FORD PROTECT**  
Continued Service Plan

Insist on Ford Protect! The only extended service plan fully backed by Ford and honored at every Ford dealership in the U.S., Canada and Mexico. See your Ford dealer or visit [www.FordOwner.com](http://www.FordOwner.com).

SCAN QR TEXT 1FPEC22451 TO 48028

Map & Data rates may apply. Text HELP for help.



[www.ford.com/help/privacy-terms](http://www.ford.com/help/privacy-terms)

**WARNING:** Operating, servicing and maintaining a passenger vehicle, pickup truck, van, or off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to [www.P65Warnings.ca.gov/passenger-vehicle](http://www.P65Warnings.ca.gov/passenger-vehicle).

11,100 GVWR (Basic Information)

GVWR: Gross Vehicle Weight Rating - Maximum weight rating of the vehicle

This label is affixed pursuant to the Federal Automobile Information Disclosure Act, Gasoline, License, and Title Fees, State and Local taxes are not included. Dealer installed options or accessories are not included unless listed above.

06/23/2023

# Door Label

- Date of Manufacture
- VIN – Vehicle Identification Number
- GVWR – Gross Vehicle Weight Rating
- FGAWR – Front Gross Axle Weight Rating
- RGAWR – Rear Gross Axle Weight Rating
- Tire Size
- Rim Size
- Tire Pressure (Recommended)
- Exterior Paint
- Wheelbase
- Interior Trim
- Transmission (Auto /Manual)
- Spring
- Axle Code

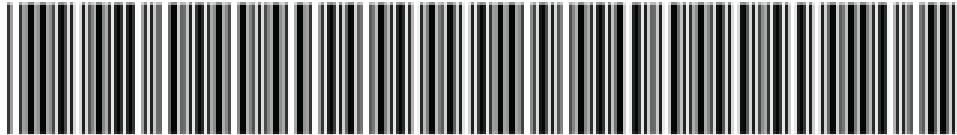
**MFD. BY FORD MOTOR CO.**

DATE: XX/XX	GVWR: XXXX KG ( XXXX LB)	
FRONT GAWR:	REAR GAWR:	
XXXX KG ( XXXX LB)	XXXX KG (XXXX LB)	WITH
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	TIRES
XXXXXX	XXXXXX	RIMS
AT XXXX kPa/ XXX PSI COLD	AT XXXX kPa/ XXX PSI COLD	WITH
		TIRES
		RIMS

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: XXXXXXXXXXXXXXXXXXXX XXXXX  
XXXXX

TYPE: XXXX



EXT PNT:	XX	XXXXXX	RC: XX	DSO: XXXX
WB	INT TR	TP/PS	R	AXLE
XXX	XX	XXX	X	XX
		XXXXXXXXXXXXXXXXXX	XXX	XXXX-XXXXXXXX-XX



# Towing Calculator (New Vehicle Purchase)



## TOWING GUIDE

F-450 DRW



F-150



F-250 SRW

### 1 CONFIGURATION

Year  
2023

Cab  
Crew Cab

Box  
8' Box

Wheel Drive  
4x4

Towing Method  
Gooseneck

### 2 TRAILER

Loaded Trailer Weight  
20000 Lbs

Tongue Percent  
10 %

### 3 PAYLOAD

Passenger Weight  
300 Lbs

Cargo Weight  
0 Lbs

**TRAILER WEIGHT**  
20,000 LBS

4 Results

**TOTAL PAYLOAD**  
2,300 LBS

This guide is for educational and informational purposes only and guidance is based upon accuracy of user input. Please consult your dealer and refer to the door jamb label for specific capabilities of a particular vehicle.

### F-250 SINGLE REAR WHEEL

CREW CAB  
8' BOX

2 Options



### F-350 SINGLE REAR WHEEL

CREW CAB  
8' BOX

3 Options



### F-350 DUAL REAR WHEEL

CREW CAB  
8' BOX

3 Options



### F-450 DUAL REAR WHEEL

# Towing Calculator (Dashboard)

## TOWING CALCULATOR

Website: <https://www.ford.com/support/towing-calculator>

### Your Vehicle's Capacity

Gross Vehicle Weight Rating	11,100 lbs
Gross Combined Weight Rating	30,000 lbs
Max Payload	3,129 lbs

### Added Weight

Occupant(s)	300 lbs
Cargo	0 lbs
Accessories	0 lbs

Conventional

Gooseneck

5th Wheel

### ✓ Remaining Capacity

Max. Tongue Load	2,200 lbs
Max. Trailer Rating	21,729 lbs

Edit Values >

2020MY – 2023MY F-Series Trucks (If you need to tow at max limit you should measure at CAT Scale because we use a conservative measurement for vehicle weight)

# Summary Slide

- Advertisement - This help give consistency when customers are crossing shopping different brands base on towing
- Engineering metrics behind tow ratings
- Minimum metrics for towing (Not all brands/OEMs tow response are the same. There will be differences in tow response)
- Ford focus on User Experience: Better communication on trailer towing max capability per vehicle & trailer configuration

# Backup Slides

# Tow Vehicle Propulsion Requirements (Chart)

Performance Attribute	Performance Metric	Requirement	Test Procedure
Level Road Acceleration	0 to 96.6 km/h (0 to 60 mph)	30.0 s (single rear wheel tow-vehicles); 35.0 s (dual rear wheel tow-vehicles)	SAE J1491, modified in 4.3.2 and 4.3.3
Level Road Acceleration	0 to 48.3 km/h (0 to 30 mph) Interval	12.0 s (single rear wheel tow-vehicles); 14.0 s (dual rear wheel tow-vehicles)	SAE J1491, modified in 4.3.2 and 4.3.3
Level Road Acceleration	64.4 to 96.6 km/h (40 to 60 mph) Interval	18.0 s (single rear wheel tow-vehicles); 21.0 s (dual rear wheel tow-vehicles)	SAE J1491, modified in 4.3.2 and 4.3.3
Launch on Grade	12% grade, forward direction	5 launches to 5.0 m (16 ft) in 5 min	92/21/EEC, Annex II, Section 3.3.3, modified in 4.3.2 and 4.3.4
Launch on Grade	12% grade, reverse direction	5 launches to 5.0 m (16 ft) in 5 min	92/21/EEC, Annex II, Section 3.3.3, modified in 4.3.2 and 4.3.4
Highway Gradeability	Minimum speed on grade (Davis Dam)	64.4 km/h (40 mph) (single rear wheel tow-vehicles); 56.3 km/h (35 mph) (dual rear wheel tow-vehicles)	4.3.2 and 4.3.5
Highway Gradeability	Drivetrain system performance	No component failures; no diagnostic codes that alert the operator; no customer warnings	4.3.2 and 4.3.5
Highway Gradeability	Cooling system performance	No component failures; no diagnostic codes that alert the operator to take service or driving action; no customer warnings; no fluid loss	4.3.2 and 4.3.5