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2011 E-SERIES

TRAILER TOWING SELECTOR

E-SERIES VAN/WAGON⁽¹⁾

Engine	Axle Ratio	GCWR (Lbs.)	Maximum Loaded Trailer Weight (Lbs.) – Automatic Transmission									
			VAN					WAGON				
			E-150	E-150 Extended	E-250	E-250 Extended	E-350 Super Duty	E-350 Super Duty Extended	E-150	E-350 Super Duty	E-350 Super Duty Extended 11-Pass.	E-350 Super Duty Extended 14-/15-Pass.
4.6L SOHC V8	3.73	11,500	6,000	5,900	6,000	5,900	–	–	5,600	–	–	–
	4.10	12,000	6,500	6,400	6,500	6,400	–	–	6,100	–	–	–
5.4L SOHC V8	3.73	13,000	7,500	7,300	7,400	7,300	7,400	7,200	7,000	6,700	6,500	6,300
	4.10	13,000	7,500	7,300	7,400	7,300	7,400	7,200	7,000	6,700	6,500	6,300
6.8L SOHC V10	3.73	15,000	–	–	–	–	9,100	9,000	–	8,500	8,300	8,100
	4.10	18,500	–	–	–	–	10,000	10,000	–	10,000	10,000	10,000

(1) Maximum loaded trailer weight requires weight distribution hitch. **Note:** Trailer tongue load weight should be 10-15% of total loaded trailer weight. Make sure vehicle payload (reduced by option weight) will accommodate trailer tongue load weight and weight of passengers and cargo added to towing vehicle. Addition of trailer tongue load weight and weight of passengers and cargo cannot cause vehicle weights to exceed rear GAWR or GVWR. These ratings can be found on the vehicle Safety Compliance Certification Label.

STANDARD TOWING EQUIPMENT & TRAILER TOWING PACKAGES

Model (Option Code)	E-Series Van/Wagon (534)(a)	E-Series Van/Wagon (536)
7-Wire Harness & 7-Pin Connector	–	X(b)
Trailer Wiring Harness (4-Pin)	X	–
Hitch Receiver	–	X
Aux. Auto Trans. Oil Cooler	(Std.)	(Std.)
Electric Brake Controller Tap-In Capability	–	X

(a) Included with optional rear step bumper (768/769).

(b) Blade-style female connector/bumper bracket, including relay system for backup/B+/running lights.

Notes: • Content may vary depending on model, trim and/or powertrain. See your Dealer for specific content information.

- Trailer Towing Package recommended for all light trucks that will be used for towing to help ensure easy, proper connection of trailer lights.

Required Equipment

Includes items that must be installed.* Your New Vehicle Limited Warranty (see your dealer for a copy) may be voided if you tow without them.

E-Series

- For trailers over 5,000 pounds – Class II/III/IV Trailer Tow Package

*Check with your dealer for additional requirements and restrictions.

2011 E-SERIES



E-SERIES CUTAWAY & STRIPPED CHASSIS

To determine Maximum Trailer Weight, subtract your vehicle's GVWR from the following GCWRs:

- E-250 Super Duty Cutaway GCWR:
 - 4.6L V8/4R75E – 12,000 lbs.
- E-350 Super Duty Cutaway GCWRs:
 - 5.4L V8/4R75E – 9,600 lbs. (SRW)
 - 5.4L V8/4R75E – 10,050 lbs. (DRW)
 - 5.4L V8/5R110W – 13,000 lbs.
 - 6.8L V10 – 18,500 lbs.
- E-350 Super Duty Extended Cutaway GCWR:
 - 5.4L V8/4R75E – 10,600 lbs.
- E-450 Super Duty Cutaway GCWRs:
 - 5.4L V8/5R110W – 14,050 lbs.
 - 6.8L V10/5R110W – 22,000 lbs.
- E-350 Super Duty Stripped Chassis GCWRs:
 - 5.4L V8/5R110W – 13,000 lbs.
 - 6.8L V10/5R110W – 18,500 lbs.
- E-450 Super Duty Stripped Chassis GCWRs:
 - 5.4L V8/5R110W – 14,050 lbs.
 - 6.8L V10/5R110W – 22,000 lbs.

Frontal Area Considerations

Vehicle Line	Frontal Area Limitations/ Considerations	With
E-Series	60 sq. ft.	All Applications

Frontal Area is the total area in square feet that a moving vehicle and trailer exposes to air resistance. The chart shows the limitations that must be considered in selecting a vehicle/trailer combination. Exceeding these limitations may significantly reduce the performance of your towing vehicle. Selecting a trailer with a low-drag, rounded front design will help optimize performance and fuel economy.

How to Find Your Truck's Axle Ratio

AXLE RATIOS

If you do not know the axle ratio of your vehicle, check its Truck Safety Compliance Certification Label (located on the left front door lock facing or the door latch post pillar). Below the bar code, you will see the word AXLE and a two-digit code. Use this chart to find the axle ratio that corresponds to that code:

Vehicle	Rear Axle Ratio	Non-Limited Slip Rear Axle Code	Limited Slip Rear Axle Code
E-Series	3.73	24/34/A2/A4	B4/C4/D2/D4
	4.10	22/32/52/56/82	B2/C2/E2/E6/F2
	4.56	83	F3

Factory-Installed Trailer Hitch Receiver Options

E-Series Van/Wagon: Included with Trailer Tow Package – Option Code 536

Note: See chart below for the weight-carrying and weight-distributing capacities of these hitch receivers. (These capacities also are shown on a label affixed to each receiver.)

The vehicle owner is responsible for obtaining the proper hitch ball, ball mounting, weight-distributing equipment (i.e., equalizing arms and snap-up brackets, sway control system) and other appropriate equipment to tow both the trailer and its cargo load.

Rear Step Bumper/Hitch Receiver Weight Capacity

The maximum weight capacities for the weight-distributing hitch receivers shown below may exceed the maximum loaded trailer weight for the vehicle specified. Refer to the Trailer Towing Selector chart for Maximum Loaded Trailer Weights for this vehicle.

Vehicle	Weight-Carrying Max. Trailer Capacity (Lbs.) ⁽¹⁾	Max. Tongue Load (Lbs.)	Weight-Distributing Max. Trailer Capacity (Lbs.) ⁽¹⁾	Max. Tongue Load (Lbs.)
Rear Step Bumper:				
E-Series Van/Wagon	5,000	500	–	–
Hitch Receiver:				
E-Series Van/Wagon	5,000	500	10,000	1,000

(1) Rear step bumpers and hitch receivers do not include a hitch ball or ball mounting. The vehicle owner is responsible for obtaining the proper hitch ball, ball mounting, weight distributing equipment (i.e., equalizing arms and snap-up brackets, sway control system) and other appropriate equipment to tow both the trailer and its cargo load.

Before You Buy

If you are selecting a vehicle that will be used for towing, you should determine the approximate weight of the trailer you intend to tow, including the weight of any additional cargo and fluids that you will be carrying in the trailer. Also be sure the vehicle has the proper optional equipment. Keep in mind that performance can be severely compromised in hilly terrain when minimum acceptable powertrain combination is selected. Consider purchasing a vehicle with a more powerful engine.

BRAKES

Many states require a separate braking system on trailers with a loaded weight of more than 1,500 pounds. For your safety, Ford Motor Company recommends that a separate functional brake system be used on any towed vehicle, including those dolly-towed or towbar-towed. There are several basic types of brake systems designed to activate trailer brakes:

- 1. Electronically Controlled Brakes** usually provide automatic and manual control of trailer brakes. They require that the tow vehicle be equipped with a controlling device and additional wiring for electrical power. These brakes typically have a control box installed within reach of the driver and can be applied manually or automatically.
- 2. Electric-Over-Hydraulic (EOH) Trailer Brakes** are operated by an electrically powered pump that pressurizes a hydraulic fluid reservoir built into the trailer's brake system. Many of the available EOH trailer brake models are compatible with Ford's factory installed, dash-integrated Trailer Brake Controller (TBC).
- 3. Surge Brakes** are independent hydraulic brakes activated by a master cylinder at the junction of the hitch and trailer tongue. They are not controlled by the hydraulic fluid in the tow vehicle's brake system, and the tow vehicle's hydraulic system should never be connected directly to the trailer's hydraulic system.

Be sure your trailer brakes conform to all applicable state regulations. See *Trailer Tips* for additional braking information.

After You Buy

Before heading out on a trip, check your vehicle's Owner Guide for break-in and severe-duty maintenance schedules (do not tow a trailer until your vehicle has been driven at least 500 miles). Be sure to have your fully-loaded vehicle (including passengers) and trailer weighed so as not to exceed critical weight limits. If any of these limits are exceeded, cargo should be removed from the vehicle and/or trailer until all weights are within the specified limits.

TRAILER LAMPS

Make sure the trailer is equipped with lights that conform to all applicable government regulations. The trailer lighting system should not be connected directly to the lighting system of the vehicle. See a local recreational vehicle dealer or rental trailer agency for correct wiring and relays for the trailer and heavy-duty flashers.

SAFETY CHAINS

- Always use safety chains when towing. Safety chains are used to retain connection between the towing and towed vehicle in the event of separation of the trailer coupling or ball
- Use cross chains under the trailer tongue to prevent the tongue from contacting the ground if a separation occurs. Allow only enough slack to permit full turning – be sure they do not drag on the pavement
- When using a frame-mounted trailer hitch, attach the safety chains to the frame-mounted hitch using the recommendations supplied by the hitch manufacturer
- See your vehicle's Owner Guide for safety chain attachment information
- For rental trailers, follow rental agency instructions for hookup of safety chains

TRAILER WIRING HARNESS

- Some vehicles equipped with a factory-installed Trailer Tow Package include a trailer wiring harness and a wiring kit
- This kit includes one or more jumper harnesses (to connect to your trailer wiring connector) and installation instructions



Trailer Tips

Towing a trailer is demanding on your vehicle, your trailer and your personal driving skills. Follow some basic rules and you'll tow more safely and have a lot more fun.

Weight Distribution

- For optimum handling and braking, the load must be properly distributed
- Keep center of gravity low for best handling
- Approximately 60% of the allowable cargo weight should be in the front half of the trailer and 40% in the rear (within limits of tongue load or king pin weight)
- Load should be balanced from side-to-side to optimize handling and tire wear
- Load must be firmly secured to prevent shifting during cornering or braking, which could result in a sudden loss of control

Before Starting

- Before setting out on a trip, practice turning, stopping and backing up your trailer in an area away from heavy traffic
- Know clearance required for trailer roof
- Check equipment (make a checklist)

Backing

- Back up slowly, with someone spotting near the rear of the trailer to guide you
- Place one hand at bottom of steering wheel and move it in the direction you want the trailer to go
- Make small steering inputs – slight movement of steering wheel results in much greater movement in rear of trailer

Turning

When turning, be sure to swing wide enough to allow trailer to avoid curbs and other obstructions.

Braking

- Allow considerably more distance for stopping with trailer attached
- Remember, the braking system of the tow vehicle is rated for operation at the GVWR, not GCWR
- If your tow vehicle is a F-150, F-Series Super Duty®, or E-Series and your trailer has electric brakes, the optional Trailer Brake Controller (TBC) will help assure smooth, effective trailer braking by automatically proportioning the trailer braking to that of the towing vehicle
- If your trailer starts to sway, apply brake pedal gradually. The sliding lever on the TBC should be used only for manual activation of trailer brakes when adjusting the gain. Misuse, such as application during trailer sway, could cause instability of trailer and/or tow vehicle

Towing On Hills

- Downshift the transmission to assist braking on steep downgrades and to increase power (reduce lugging) when climbing hills
- With TorqShift® transmission, select Tow/Haul Mode to automatically eliminate unwanted gear search when going uphill and help control vehicle speed when going downhill

Parking With A Trailer

Whenever possible, vehicles with trailers should not be parked on a grade. However, if it is necessary, place wheel chocks under the trailer's wheels, following the instructions below.

- Apply the foot service brakes and hold
- Have another person place the wheel chocks under the trailer wheels on the downgrade side
- Once the chocks are in place, release brake pedal, making sure the chocks will hold the vehicle and trailer
- Apply the parking brake
- Shift automatic transmission into Park, or manual transmission into Reverse
- With 4-wheel drive, make sure the transfer case is not in Neutral (if applicable)

Starting Out Parked On A Grade

- Apply the foot service brake and hold
- Start the engine with transmission in Park (automatic) or Neutral (manual)
- Shift the transmission into gear and release the parking brake
- Release the brake pedal and move the vehicle uphill to free the chocks
- Apply the brake pedal while another person retrieves the chocks

Acceleration And Passing

The added weight of the trailer can dramatically decrease the acceleration of the towing vehicle – exercise caution.

- When passing a slower vehicle, be sure to allow extra distance. Remember, the added length of the trailer must clear the other vehicle before you can pull back in
- Signal and make your pass on level terrain with plenty of clearance
- If necessary, downshift for improved acceleration

Driving With An Automatic Overdrive Transmission

With certain automatic overdrive transmissions, towing – especially in hilly areas – may cause excessive shifting between overdrive and the next lower gear.

- To eliminate this condition and achieve steadier performance, overdrive can be locked out (see vehicle Owner Guide)
- If excessive shifting does not occur, use overdrive to optimize fuel economy
- Overdrive may also be locked out to obtain engine braking on downgrades
- When available, select Tow/Haul Mode to automatically eliminate unwanted gear search and help control vehicle speed when going downhill

M Metric Conversion – To obtain information in centimeters, multiply feet by 30.48; to obtain information in kilometers, multiply miles by 1.6.

Driving With Speed Control

When driving uphill with a heavy load, significant speed drops may occur.

- An 8-14 mph speed drop will automatically cancel speed control
- Temporarily resume manual control through the vehicle's accelerator pedal until the terrain levels off

Tire Pressure

- Underinflated tires get hot and may fail, leading to possible loss of vehicle control
- Overinflated tires may wear unevenly
- Tires should be checked often for conformance to recommended cold inflation pressures

Spare Tire Use

A conventional full-size spare tire is required for trailer towing (mini spare tires should not be used; always replace the spare tire with the road tire as soon as possible).

On The Road

After about 50 miles, stop in a protected location and double-check:

- Trailer hitch attachment
- Lights and electrical connections
- Trailer wheel lug nuts for tightness
- Engine oil – check regularly throughout trip

High Altitude Operation

Gasoline engines lose power by 3-4% per 1,000 ft. elevation. To maintain performance, reduce GVWs and GCWs by 2% per 1,000 ft. elevation.

Powertrain/Frontal Area Considerations

The charts in this Guide show the minimum engine size needed to move the GCW of tow vehicle and trailer.

- Under certain conditions, however, (e.g., when the trailer has a large frontal area that adds substantial air drag or when trailering in hilly or mountainous terrain) it is wise to choose a larger engine
- Selecting a trailer with a low-drag, rounded front design will help optimize performance and fuel economy

NOTE: For additional trailering information pertaining to your vehicle, refer to the vehicle Owner Guide.

For the latest RV/Towing information, check out the Ford Fleet Web site at www.fleet.ford.com/showroom/rv_trailer_towing/2011/2011_default.asp

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