

CARD/STICKERS POCKET (SLEEVE)

IMPORTANT

The operation of the Pro Trailer Backup Assist with Trailer Reverse Guidance system depends on how and where you place the sticker or sensor.

• DO NOT ATTEMPT TO PLACE THE STICKER OR SENSOR UNTIL YOU READ THROUGH THIS GUIDE.



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This Quick Start Guide is not intended to replace your vehicle Owner's Manual, which contains more detailed information concerning the features of your vehicle, as well as important safety warnings designed to help reduce the risk of injury to you and your passengers. Please read your entire Owner's Manual carefully as you begin learning about your new vehicle and refer to the appropriate chapters when questions arise. All information contained in this Quick Start Guide was accurate at the time of duplication. We reserve the right to change features, operation and/or functionality of any vehicle specification at any time. Your Ford dealer is the best source for the most current information. For detailed operating and safety information, please consult your Owner's Manual.

WARNING: Driving while distracted can result in loss of vehicle control, crash and injury. We strongly recommend that you use extreme caution when using any device that may take your focus off the road. Your primary responsibility is the safe operation of your vehicle. We recommend against the use of any hand-held device while driving and encourage the use of voice-operated systems when possible. Make sure you are aware of all applicable local laws that may affect the use of electronic devices while driving.

LEARN MORE ABOUT YOUR NEW VEHICLE

To put QR tags to work for you, use your mobile phone's browser or app store to download a QR tag reader. Then follow the directions to scan the QR tag and see your vehicle's features come to life.

2021 SUPER DUTY

PRO TRAILER BACKUP ASSIST WITH TRAILER REVERSE GUIDANCE

QUICK START GUIDE



WHAT IS PRO TRAILER BACKUP ASSIST WITH TRAILER REVERSE GUIDANCE?

The Pro Trailer Backup Assist with Trailer Reverse Guidance utilizes the control knob on your instrument panel, your steering wheel and a suite of cameras to take the guesswork out of getting your trailer positioned where you want it, quickly and easily, while you're driving in reverse.

Turn the knob in the direction you want the trailer to go and the system takes over the steering to get it there. This allows you to focus on monitoring the mirrors and applying the brake and accelerator. Use the cameras and on screen guidance to make even the most difficult maneuvers simple. This guide walks you through the set up process, calibration and operation.

Below is some of the added functionality that Trailer Backup Assist with Trailer Reverse Guidance provides:

TRAILER REVERSE GUIDANCE CAMERA



See the camera view on the side where your trailer is moving, or both sides when the trailer is straight behind you.

Does not require setup.

STEER TRAILER WITH KNOB



Allows you to easily maneuver a trailer by turning the knob in the direction you want the trailer to go.



See page 17 for operation.

Setup required.

HITCH ANGLE GRAPHIC

A small top view representation of your truck and trailer.

The lines show you where your trailer is and where it is projected to go.



See page 21 for operation.

AUTO SPLIT-VIEW CAMERA



Changes views with the trailer direction.

See page 20 for operation.

STRAIGHT BACKUP MODE



If you want to use your steering wheel:

A steering wheel image shows you which way to turn your steering wheel to keep your trailer straight.

See page 19 for operation.

HOW DO I USE IT?

Set up this feature by following the steps in this guide.

You will need to complete the steps for the trailer type that you will be using.

If you are using a 5th wheel or gooseneck trailer, begin by installing the sensor as shown on **page 14**.

SET UP YOUR SYSTEM

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HITCH ANGLE GRAPHIC

TO SET UP THIS FEATURE, USE THE:

- (A) 5-way controls on your steering column
- (B) Information display in your instrument cluster
- (C) Pro Trailer Backup Assist control knob
- (D) Center display



A

5-way controls

B

Information display

C

Control knob

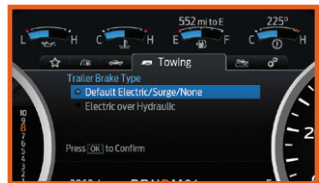
D

Center display

SET UP YOUR SYSTEM



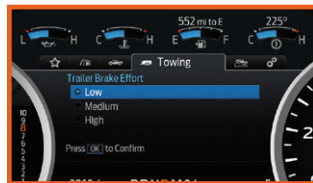
Press the center button on the **KNOB** located to the right of the steering wheel to begin setting up the system.



Select the type of brake system for your trailer. Select **Default Electric/Surge/None** if your trailer has electric, surge or no brakes. Press **OK** to select and advance to the next screen.



using the **INFORMATION DISPLAY**. Use the five-way controls on your steering wheel to access your information display menus. Navigate to the Towing menu. Select **Trailer Setup** from the available options. Select **Add Trailer** and press **OK** to confirm.



Select the brake effort for your trailer. The default value is **Low** and is the recommended setting for most trailers. If your trailer's brakes require more initial voltage, or if you prefer more aggressive trailer braking, then select either the **Medium** or the **High** setting.

FEATURE SETUP

Use the arrows on the steering wheel control to select **Add Trailer** and press **OK** to confirm.

You can also set up the system by using the **INFORMATION DISPLAY**. Use the five-way controls on your steering wheel to access your information display menus. Navigate to the Towing menu. Select **Trailer Setup** from the available options. Select **Add Trailer** and press **OK** to confirm.



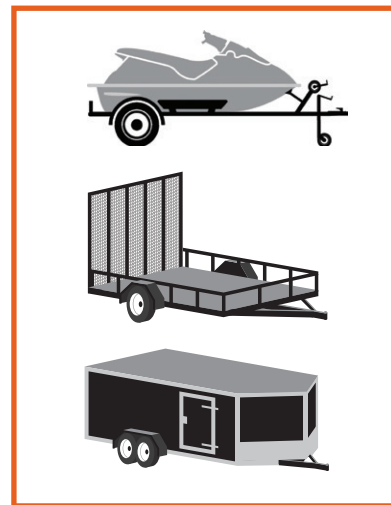
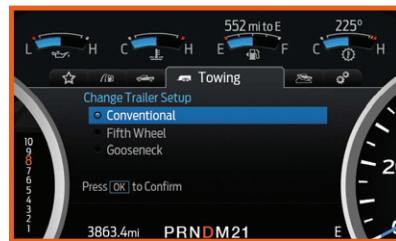
Name your trailer. Use the 5-way steering wheel controls to choose the alphanumeric characters. Press the right arrow to advance to the next letter. When finished spelling out the name of the trailer, press **OK** to confirm. To delete a letter, press the up or down arrow key until you see a blank.

SELECT YOUR TRAILER TYPE

Use the images to the right to help you determine your trailer type. For example, if you have a conventional trailer, select **Conventional**.

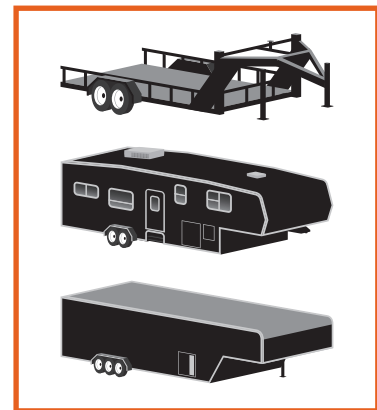
CONVENTIONAL TRAILER EXAMPLES

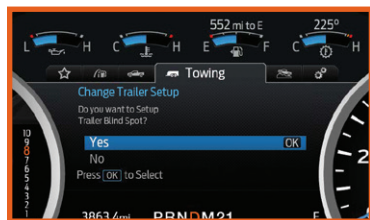
The use of these trailers requires the placement of a sticker. Please continue on for the sticker placement instructions.



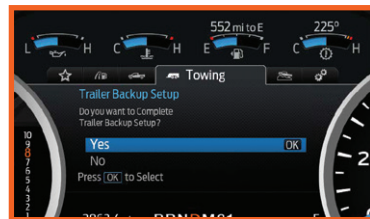
FIFTH WHEEL AND GOOSENECK TRAILER EXAMPLES

The use of these trailers requires the installation of a sensor. Please see **page 14** for sensor installation. If your sensor is already installed, please continue to **page 16**.

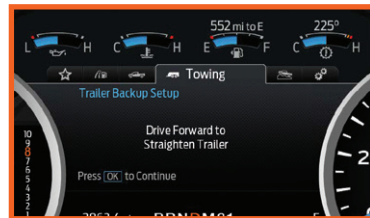




If you are setting up a conventional trailer, the system may prompt you to set up the Trailer Blind Spot Information System (BLIS)* before setting up Pro Trailer Backup Assist.



Next, a message appears in the information display asking if you want to add Pro Trailer Backup Assist.



Straighten out the trailer, if necessary.

The screen directs you to this guide.

To continue setting up a Conventional trailer, see **page 6**. For 5th Wheel or gooseneck calibration, please see **page 16**. For 5th Wheel or gooseneck sensor installation, please see **page 14**.

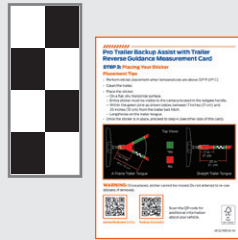
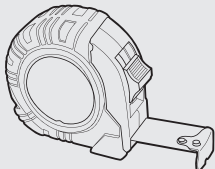


FEATURE SETUP



CONVENTIONAL TRAILER

WHAT YOU NEED FOR A ONE-TIME SETUP

MAKE SURE YOU HAVE THE FOLLOWING ITEMS:

<p>This guide with the measurement card and the stickers in the inside back cover pocket</p>	<p>Tape measure (English or metric)</p>	<p>Pen to record your measurements in the guide</p>	<p>An adult or older child assistant to help you with measurements (optional)</p>
			

Scan the QR code for additional information about your vehicle.



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ONE-TIME SETUP

Once you input your trailer's information into the information display, it is stored for easy recall. That way, when you want to use the Pro Trailer Backup Assist with Trailer Reverse Guidance system to help you back your trailer into your desired position, you can choose it from the information display. You will not have to run through this setup again unless you want to add another trailer. You can store information for up to 10 trailers within this feature.



CONVENTIONAL TRAILER

POSITION YOUR TRUCK AND TRAILER

Read and follow all of these steps carefully to get the best results.

- Hitch your trailer to the truck and connect the electrical wiring harness. Check to make sure that the wiring is working.
- Park your truck and hitched trailer on a level surface.



- Make sure that the trailer and truck are in line with each other. You can do this by putting the truck in drive (D) and pulling straight forward.



CONVENTIONAL TRAILER

PLACING THE STICKER

Place the entire sticker in the green zone on the trailer as outlined in the diagram on the next page. The sticker is in the back cover pocket of this guide.



Rear view camera

Note: An assistant can help you complete the next page's tasks.

Make sure you gather the following items before exiting the vehicle:



Sticker and measurement card (provided inside the back cover pocket of this guide).

Tape measure and pen (not provided).

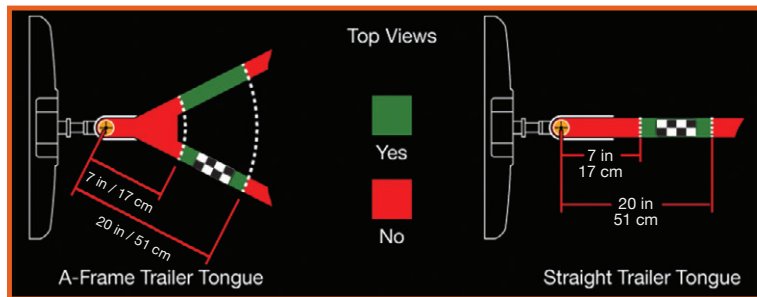
CONVENTIONAL TRAILER



OUTSIDE THE VEHICLE

- Take the measurement card and the sticker from the back of this guide, a tape measure and a pen, and walk back to your trailer.
- Determine where to place the sticker. You must place it in the green zone as indicated in the diagram below.
- Confirm that the sticker is visible using the center display. An assistant can remain inside the vehicle to help you do this.

STICKER PLACEMENT DIAGRAM



Note: You must place the **entire sticker** within the green zone. Once you place the sticker, you cannot move it. Do not attempt to re-use stickers. Use a new sticker.

STICKER PLACEMENT TIPS

- Perform sticker placement when temperatures are above 32° F (0° C).
- Put the sticker on a flat, dry, clean horizontal surface.
- Using a tape measure, find a place to put the entire sticker in the range shown:
 - Within the green zone.
 - Between 7 inches (17 centimeters) and 20 inches (51 centimeters) from the trailer ball hitch.
- Make sure no hardware will obstruct the view from the camera to the sticker (jack handle, wiring, etc.).
- Place the sticker.

CONVENTIONAL TRAILER

MEASURING THE KEY POINTS

OUTSIDE THE VEHICLE

Now that the sticker is in place, you must take a few measurements.

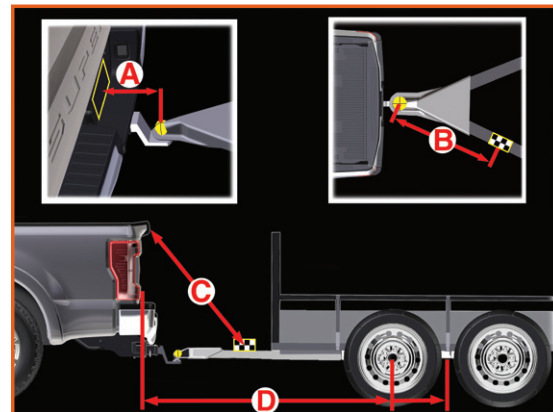
For the system to perform its best, it is important to make sure that the measurements you take are accurate.

Record all four distances on your measurement card, located in the back cover pocket of this guide.

MEASUREMENT TIPS

- For measurements A, B and C, if a distance ends in one-quarter of a measurement unit or greater, round up to the next half-increment. If not, round down. For example, 12 ¼ inches would be rounded up to 12 ½ inches. 12 ⅛ inches would be rounded down to 12 inches.
- Round measurement D to the nearest inch.
- Be sure to use the measurement unit that is consistent with what your vehicle uses. Use inches if your vehicle is set to U.S. units. Use centimeters if your vehicle is set to metric units.

Note: An easy way to check to see which units your vehicle uses is to look for *outside temperature readings or estimated fuel economy. Fahrenheit or miles indicates U.S. units. Celsius or kilometers indicates metric units.*



MEASUREMENT A

The horizontal distance from the license plate to the center of the ball hitch on the trailer.

MEASUREMENT B

The horizontal distance from the center of the ball hitch to the center of the sticker.

MEASUREMENT C

The distance from the rear view camera to the center of the sticker.

MEASUREMENT D

The distance from the tailgate to the center of the trailer axle (single axle) or the center of the trailer axles (two or more axles).

CONVENTIONAL TRAILER

ENTERING YOUR MEASUREMENTS

INSIDE THE VEHICLE

For this part of the setup, use the information display and your **5-way steering wheel controls** to enter the four measurements into the system.



ENTERING YOUR MEASUREMENTS

- Use the up/down arrows to increase or decrease the numbers as needed. Press **OK** to confirm each measurement. The screen prompts you to add the next measurement.
- Refer to your recorded measurements on the measurement card and enter each measurement into the information display.

Once you add your last measurement, the information display shows you all of your entered measurements. Review and confirm.

Note: If you want to revise your measurements, highlight **Change** and press **OK**. Otherwise, press the arrow to highlight **Confirm** and press **OK**.

CONVENTIONAL TRAILER

CONFIRMING THE STICKER

Look for the circle in the display.

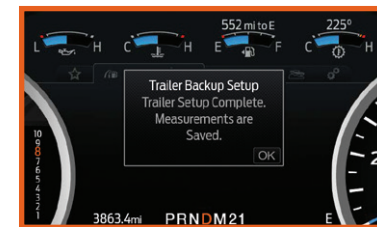
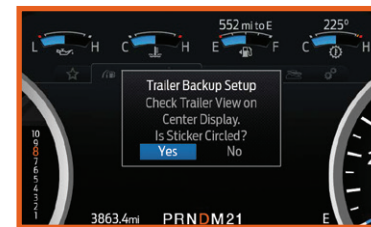
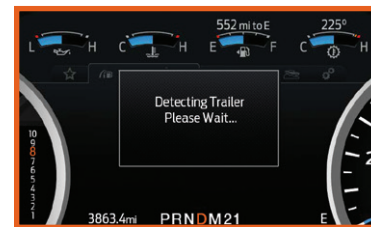
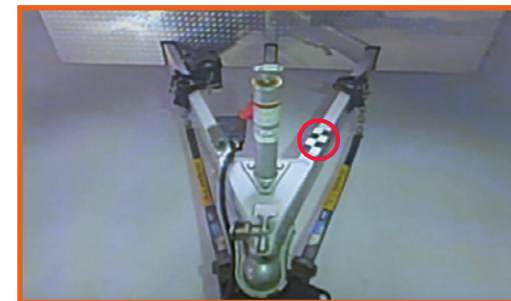
Is that your sticker?

Use the steering wheel controls to select **Yes** or **No**.

Note: If your system cannot locate the sticker, try the following:

- Clean the rear view camera lens.
- Make sure you place the sticker between 7 inches (17 centimeters) and 20 inches (51 centimeters) from the trailer ball hitch.
- Refer to your Owner's Manual for additional support.

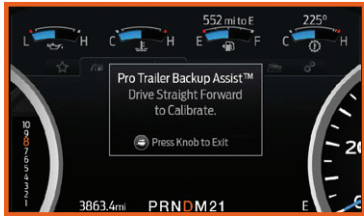
The information display shows a confirmation message when you successfully confirm the target.





CONVENTIONAL TRAILER

CALIBRATION



Note: You can calibrate within the Trailer Backup Assist or Trailer Reverse Guidance system.

To complete the setup, you need to drive the vehicle straight forward between 4 and 24 mph (6 and 39 km/h) as directed by the information display.

Note: Keep the steering wheel straight during the calibration process. If the steering wheel is in a turned position, then the calibration pauses. The information display prompts you to drive straight forward to complete the calibration.



The information display shows a message when the system calibrates.



When the calibration is complete, the information display shows a message that calibration is complete. The feature is now ready to use. Please refer to the Feature Operation section ([page 17](#)) for information on how to operate the feature.

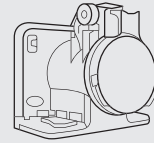
Note: For best results, we do not recommend that you calibrate the system at night.



5TH WHEEL OR GOOSENECK TRAILER

WHAT YOU WILL NEED TO INSTALL YOUR SENSOR

The sensor kit contains the components below. You may need additional items to install your sensor.



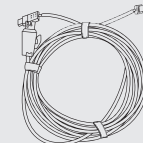
1 - Dock Station

Use to secure harness plug when not connected to truck.



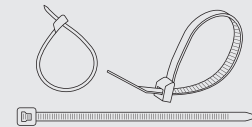
1 - Sensor and Housing

The sensor detects trailer rotation, the housing protects the sensor. The sensor housing must be installed with the arrows pointing up.



1 - 10 foot Wire Harness

Wire harness to be used with the sensor.



4 - Sensor & Dock Station Tie Strap 8 - Wire Harness Tie Strap

Use the larger tie straps to secure the sensor housing and docking station to the trailer post or frame.

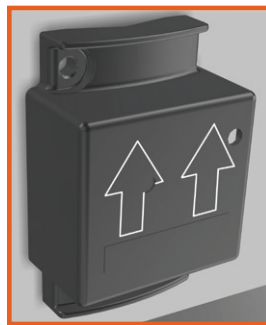
Use the smaller tie straps to secure the wire harness to the trailer.

For sensor installation instructions, please refer to installation instructions included with the sensor kit.

5TH WHEEL OR GOOSENECK TRAILER

SENSOR INSTALLATION

To use the 5th wheel and gooseneck capabilities of the system, you will need the sensor kit and the 7/12 pin trailer connector. If your vehicle is equipped with the 5th wheel prep package, you have everything you need. If it is not, you will need to contact your Ford dealership to purchase the sensor kit and the 7/12 pin connector.



The sensor must be mounted to a vertical part of the trailer that pivots and moves when you turn your vehicle. Do not mount to a stationary surface or to the truck side of the 5th wheel trailer hitch.

Make sure the arrows on the sensor housing are facing up.



When you plug in the sensor connector, the red seal on the connector should not be visible when the connector is fully plugged in.

For sensor installation instructions, please refer to the sensor kit.

5TH WHEEL OR GOOSENECK TRAILER

CALIBRATION



Note: You can calibrate within the Trailer Backup Assist or Trailer Reverse Guidance system.

An area where you can safely drive forward and turn left or right is required to calibrate your system. An open parking lot is an ideal place to perform the calibration. During calibration, the system determines the trailer length. Drive straight at approximately 5 mph to align the trailer behind your vehicle.

The information display and center screen provides you with instructions and will tell you when the system is ready for you to turn. Turn left or right whenever you are ready and in a safe turning area.



 Too shallow of a turn



 Correct 90 degree turn

When the calibration is complete, the information display shows a message that calibration is complete. The feature is now ready to use. Please refer to the Feature Operation section ([page 17](#)) for information on how to operate the feature.

FEATURE OPERATION

USING TRAILER BACKUP ASSIST

- To switch on the system, press the center button on the knob and watch the information display screen. Use the steering wheel controls to highlight your trailer, then press **OK** to select. The system will locate your sticker for a conventional trailer or confirm the sensor is connected for a 5th wheel or gooseneck trailer.
- Shift into reverse to activate. The information display will instruct you to remove your hands from the steering wheel.
- Use the knob to turn the trailer. Turning the knob to the left will turn the trailer to the left. Turning the knob to the right will turn the trailer to the right.



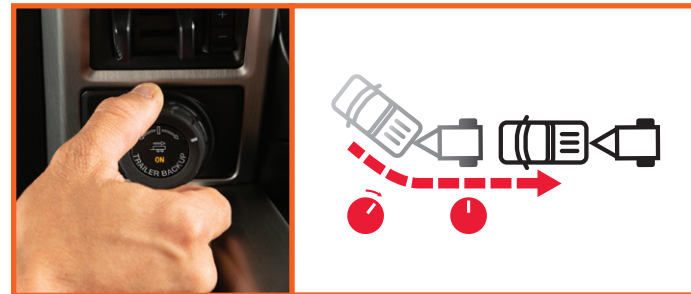
FEATURE OPERATION

USING TRAILER BACKUP ASSIST

- Once you have the trailer moving in the direction you want it to go, release the knob. You control the accelerator and brakes while the system steers the truck to keep the trailer moving straight back.
- The sharper you turn the knob, the sharper the trailer will turn.

Note: If you attempt to accelerate beyond the system's threshold, the system automatically limits your vehicle's speed.

Note: If you use the steering wheel, you will be canceled out of the Pro Trailer Backup Assist system. A warning will appear.



- As soon as you release the knob or turn it back to the center position, the vehicle starts following the trailer's path.
- Turn and hold the knob continuously for sharper vehicle and trailer turns.
- **CAUTION:** Always keep your hand close to the control knob. You may need to redirect the trailer quickly.
- You may have to use the knob to correct the trailer direction while attempting to move the trailer straight back under some conditions.

Note: For 5th wheel and gooseneck trailers, the weight and hitch position of these trailers may make the trailer respond differently to the knob input than conventional trailers. You may need to release the knob early or stop and pull forward to align your truck and trailer when returning to straight backing after making a turn.

FEATURE OPERATION

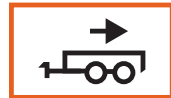
USING TRAILER REVERSE GUIDANCE

Trailer Reverse Guidance provides informational graphics and up to 7 camera views to help you back up your trailer while you use the steering wheel to control your trailer.

If you do not set up the system, you can still use the camera views. However, the hitch angle graphic, automatic view switching and straight backup mode will not be available. You will need to complete the system setup for full functionality.



- To use Trailer Reverse Guidance, shift your vehicle into reverse and press the rear view camera button on the center screen to expand the menu.
- Select the Trailer Reverse Guidance icon on the screen. You will need to select your trailer from the information display.



- The system will locate your sticker for a conventional trailer and confirm the sensor is connected for a 5th wheel or gooseneck trailer.
- The auto mode camera view is the default display. You can now use your steering wheel and the camera views to navigate your trailer into position.


USING STRAIGHT BACKUP MODE WITH TRAILER REVERSE GUIDANCE



- This view is only available when you are in Trailer Reverse Guidance.
- This mode will show you which way to turn your steering wheel to keep your trailer backing up straight. A steering wheel icon image is shown on the center screen. A blue arrow will show you which way to turn your wheel to keep your trailer straight.
- To activate this mode, select the rearview camera icon, then the straight backup mode icon.

VIEW OPERATION

Use the buttons below to select the best view for backing up your vehicle and trailer. You can use these views for Pro Trailer Backup Assist or Trailer Reverse Guidance.

You can select the following views by selecting the rear camera icon  on the center display. The view drawer displays. (View drawer shown)



360 Camera: shows the rear camera view on the left side of the screen and the 360 degree view on the right side of the screen.



Rear View Camera: shows what is behind your vehicle.



Rear Split View Camera: shows a 180 degree view of area behind your vehicle.



Bed Camera: shows the truck bed and can be used to hitch a 5th wheel or gooseneck trailer.



Trailer AUX Camera*: shows a rear view camera image of what is behind your trailer. This camera needs to be purchased and installed separately.



Trailer Reverse Guidance View: shows you a view of the sides of your truck and your trailer.



In auto mode, this view moves as your trailer moves so that you do not have to adjust the camera as you turn. You can use the left and right arrows to see more of the driver or passenger side. Press **Auto** to return to automatic camera adjustments.

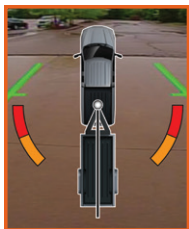


Takes you back to the 360 degree camera system and out of the Trailer Reverse Guidance feature.

HITCH ANGLE GRAPHIC

5TH WHEEL TRAILER

CONVENTIONAL TRAILER



The hitch angle graphic display shows you a small, top-view representation of your truck and trailer.

This representation shows two different-colored lines:

- A black line shows you where your trailer is in relation to your vehicle.
- For Trailer Backup Assist, the white line represents the amount the trailer will turn based on knob input.
- For Trailer Reverse Guidance, the white line represents the amount the trailer will turn based on steering wheel position.

This graphic can be seen in the Rear Normal Camera, Bed Camera, Trailer AUX Camera and Trailer Reverse Guidance Camera views.

