

FORD F450 TAILGATE HANDLE

Back Up Camera

Product Manual / Installation Instructions



Rear View Camera Systems
Model # RVS-F450

Rear View Safety, Inc. © 2018

 **REAR VIEW
SAFETY**
A Safe Fleet Brand

What's in the Box?

Note: Your configuration will vary depending on your item options

- 1 Color Sony CCD night vision weather proof backup camera
- 1 Power Wire

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Introduction

Please read all of the installation instructions carefully before installing the product. Improper installation will void manufacturer's warranty.

Congratulations on purchasing a Rear View Backup Camera System! With this manual you will be able to properly install and operate the unit.

The Backup Camera System is intended to be installed as a supplemental aid to the rear view mirror in your vehicle. The Backup Camera System should not be used as a substitute for the standard rear view mirror or for any other mirror in your vehicle.

In some jurisdictions, it is unlawful for a person to drive a motor vehicle equipped with a TV viewer or screen located forward of the back of the driver's seat or in any location that is visible, directly or indirectly, to the driver while operating the vehicle.

Safety Information

Please read the entire manual and follow the instructions and warnings carefully. Failure to do so can cause serious damage and/or injury, including loss of life. Be sure to obey all applicable local traffic and motor vehicle regulations as it pertains to this product. Improper installation will void manufacturer's warranty.

USAGE

- The Rear View Camera System is designed to help the driver safely detect people and/or objects helping to avoid damage or injury. However, you the driver, must use it properly. Use of this system is not a substitute for safe, proper or legal driving.
- Never back up while looking at the monitor alone. You should always check behind and around the vehicle when backing up, in the same way as you would if the vehicle did not have the Rear View Camera System. If you back up while looking only at the monitor, you may cause damage or injury. Always back up slowly.
- The Rear View Camera System is not intended for use during extensive back-up maneuvers or backing into cross traffic or pedestrian walkways.
- Please, always remember, the area displayed by the Rear View Camera System is limited. It does not display the entire panorama that is behind you.

Safety Information

INSTALLATION

- Electric shock or product malfunction may occur if this product is installed incorrectly.
- Use this product within the voltage range specified. Failure to do so can cause electronic shock or product malfunction.
- Take special care when cleaning the monitor.
- Make sure to firmly affix the product before use.
- If smoke or a burning smell is detected, disconnect the system immediately.
- Where the power cable may touch a metal case, cover the cable with a friction tape. A short circuit or disconnected wire may cause a fire.
- While installing the Rear View System be careful with the wire positioning in order to avoid wire damage.
- The Rear View System should only be used when the vehicle is in reverse.
- Do not watch movies or operate the monitor while driving; as it may cause an accident.
- Do not install the monitor where it may obstruct drivers view or obstruct an air bag device.
- Dropping the unit may cause possible mechanical failure.

Safety Information

If you have questions about this product, contact:

Customer Service:
Rear View Safety
1797 Atlantic Avenue
Brooklyn, NY 11233
Tel: 1.800.764.1028

IN NO EVENT SHALL SELLER OR MANUFACTURER BE
LIABLE FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES OF
ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM
ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.



Before You Begin Installation

Before drilling please check that no cable or wiring is on the other side of the wall. Please clamp all wires securely to reduce the possibility of them being damaged while vehicle is in use. Keep all cables away from hot or moving parts and electrical noisy components.

We recommend doing a benchmark test before installation to insure that all components are working properly.

Step 1: Choose the monitor and camera locations.

Step 2: Install all cables in vehicle, when necessary a 0.8 (20mm) hole should be drilled for passing camera cable through vehicles walls. Install split grommets where applicable.

Step 3: Once all cables and wiring have been properly routed, perform a system function test by temporarily connecting the system. If the system seems to not be operating properly see troubleshooting (page 15).

Installation Guide

Camera & Cable

When installing the camera at the rear of the vehicle, remove the existing tailgate handle and replace with the tundra tailgate handle.

Be sure to position the cable properly. The aviation camera cable uses aircraft grade connectors which means the camera cable can be exposed to all weather elements. Do not run the cable over sharp edges, do not kink the cable and keep away from HOT and rotating parts.

Fasten all cables and secure all excess cable. Connect camera to the camera extension cable which runs inside the vehicle. Attach camera to the center of the license plate area using the screws provided and adjust the angle. **Figure 1.1**

Wiring

After connecting the camera to the "camera cable" the camera should be plugged into AV2 input. Connect the RED 12V power wire to an ignition power source and the BLACK 12V ground wire to a chassis ground.

The GREEN wire is the REVERSE trigger wire. Connect this wire to the vehicle's backup light circuit to activate the rear-view image whenever the vehicle shifts into reverse. To connect a second camera, connect it to AV1 and it can be turned on by pressing the power button on the monitor. **Figure 1.2**

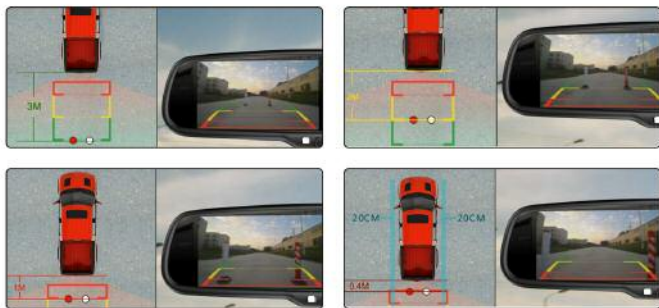
Installation Guide

Safety

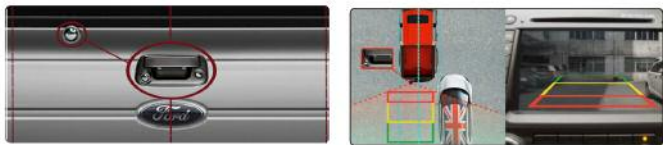
- Before drilling, be sure no cable or wire is on the other side.
- Feed as much cable as possible into vehicle & clamp securely. This reduces the possibility of cable being hooked or snagged.
- Camera: Drill a 20mm (0.8in) diameter hole into vehicle body near the camera and bracket. Insert camera cable into vehicle (be careful not to kink cable) and fit grommet into hole. Apply sealant around grommet to increase resistance to water penetration.

Adjustable Grid Line

Generally, to help drivers estimate the distance from obstacles, there are three lines for reference - red, yellow and green. Those three lines are displayed on the monitor when car is reversing. The green line is 3m from the back of car and the yellow line is 2m. The distant red line is 1m from the backside of car while the closed red line is 0.4m. Both reference lines on the left and right should leave 0.2m space from the car.



Regular guide line is fixed. But installation sites of cameras are different as well as car size. The fixed guide line is not accurate enough for drivers. There will be a great difference between regular and fixed guide lines and car's real guide lines, especially when camera is mounted on the left or right side of car backside. It may cause accidents.



Installation and Wiring

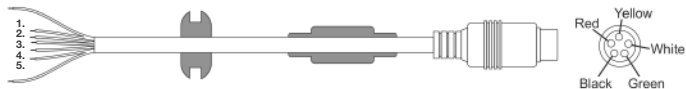
Figure 1.1



Figure 1.2



Splicing



1. Red - Power (+)
2. Yellow - Video
3. Green - Mirror / Normal Imaging
4. White - Audio
5. Black - Ground (-)

Positioning



No Image On Screen

- Do a hard reset, unplug all cables and power cables, leave out for 1 minute and then re-connect them.
- Check to ensure that the connection to the camera is tight.
- Verify camera cable is plugged into port labeled Backup Camera
- Verify that the green positive trigger on power harness is put to power 12v+.
- Verify camera is on correct camera input
- Verify cable is connected to monitor
- Verify camera is connected to cable
- Connect known working camera and cable to monitor.
- Verify Green trigger is receiving power

Camera Dimensions



4" (H) x 7.95" (L) x 0.25 "(D)

Camera Specifications

Camera	1/3 SONY IC Sensor
Current Consumption	MAX: 150mA
Sensor	CMD-III, 1/4"
Resolution (TV Lines)	420
Minimum illumination	0.5 Lux
Angle	170°
Effective Pixels	648*488
TV System	NTSC
Video Output	Full color vdeo out: 1.0Vp-p 75(ohm) load
Working Voltage	DC9-16V
Video Color	Full color
Water Proof	IP67
Operating Temperature	-30°C to +70°C
Parking guar line	On/Off Switchable
Image	Mirror

Warranty

One Year Warranty

Rear View Safety Inc. warrants this product against material defects for a period of one year from date of purchase. We reserve the right to repair or replace any such defective unit at our sole discretion.

Rear View Safety Inc. is not responsible for a defect in the system as a result of misuse, improper installation, damage or mis-handling of the electronic components. Rear View Safety Inc. is not responsible for consequential damages of any kind.

This warranty is void if: defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; the damage is due to normalware and tear, this damage is due to abuse, improper maintenance, neglect or accident: or the damage is do to use of the Rear View Safety Inc. system after partial failure or use with improper accessories.

Warranty Performance

DURING THE ABOVE WARRANTY PERIOD, SHOULD YOUR Rear View Safety PRODUCT EXHIBIT A DEFECT IN MATERIAL OR WORKMANSHIP, SUCH DEFECT WILL BE REPAIRED WHEN THE COMPLETE Rear View Safety INC. PRODUCT IS RETURNED, POSTAGE PREPAID AND INSURED, TO Rear View Safety INC. OTHER THAN THE POSTAGE AND INSURANCE REQUIREMENT, NO CHARGE WILL BE MADE FOR REPAIRS COVERED BY THIS WARRANTY.

Warranty Disclaimers

NO WARRANTY, ORAL OR WRITTEN, EXPRESSED OR IMPLIED, OTHER THE ABOVE WARRANTY IS MADE WITH REGARD TO THIS Rear View Safety INC. Rear View Safety INC. DISCLAIMS ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE AND ALL OTHER WARRANTIES IN NO EVENT SHALL Rear View Safety INC. LIABLE FOR ANY INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES OR FOR ANY COSTS, ATTORNEY FEES, EXPENSES, LOSSES OR DELAYS ALLEGED TO BE AS A CONSEQUENCE OF ANY DAMAGE TO, FAILURE OF, OR DEFECT IN ANY PRODUCT INCLUDING, BUT NOT LIMITED TO, ANY CLAIMS FOR LOSS OF PROFITS

Disclaimer

Rear View Safety and/or its affiliates does not guarantee or promise that the user of our systems will not be in/part of an accident or otherwise not collide with an object and/or person. Our systems are not a substitute for careful and cautious driving or for the consistent adherence to all applicable traffic laws and motor vehicle safety regulations. The Rear View Safety products are not a substitute for rearview mirrors or for any other motor vehicle equipment mandated by law. Our camera systems have a limited field of vision and do not provide a comprehensive view of the rear or side area of the vehicle. Always make sure to look around your vehicle and use your mirrors to confirm rearward clearance and that your vehicle can maneuver safely. Rear View Safety and/or its affiliates shall have no responsibility or liability for damage and/or injury resulting from accidents occurring with vehicles having some of Rear View Safety products installed and Rear View Safety and/or its affiliates, the manufacturer, distributor and seller shall not be liable for any injury, loss or damage, incidental or consequential, arising out of the use or intended use of the product. In no event shall Rear View Safety and/or its affiliates have any liability for any losses (whether direct or indirect, in contract, tort or otherwise) incurred in connection with the systems, including but not limited to damaged property, personal injury and/or loss of life. Neither shall Rear View Safety and/or its affiliates have any responsibility for any decision, action or inaction taken by any person in reliance on Rear View Safety systems, or for any delays, inaccuracies and/or errors in connection with our systems functions.



**If you have any questions
about this product, contact:**

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**BETTER CAMERAS. BETTER SERVICE.
IT'S OUR GUARANTEE.**

