



CS-GM1

GM NBS Truck 2007-Up CCD Backup Camera Kit Installation Guide

Thank you for your purchase! These instructions are intended for the do-it-yourselfer who decides to install the camera without professional assistance. Keep in mind you will be installing a device that uses electrical power from your computer controlled truck. If you are not confident in your ability to attach this device without damaging your electrical system, new camera, or yourself please seek PROFESSIONAL INSTALLATION!

BEFORE YOU BEGIN

Cables: The harness from the camera is long enough to run down through the bottom of the tailgate and through the back of the bed. The connector should be tied up in an accessible location behind the rear license plate so that it can be disconnected to remove the tailgate if necessary. The extension harness power and ground wires are long enough to run into the cab and we recommend that all power and ground connections be made inside the cab according to our instructions. **Power and ground connections made outside the cab are prone to fail and are not recommended!**

If you are using the factory NAV screen as your display: You must have the dealer re-flash your NAV system for a backup camera. Any GM dealer can do it and it *should* cost around \$100 or less. In addition, you may need a video interface that allows you to connect the camera to the factory wiring harness at the back of the radio.

If you are using an aftermarket navigation display you should already have the proper video input and reverse trigger wire required for this installation.

REQUIRED TOOLS

- Standard wire stripper/crimper
- 13mm socket wrench
- Black tape or shrink tube
- Razor knife or poking tool (optional)
- 1/4" and 1" drill bit or step bit (*if holes are not pre-drilled at factory*)
- Drill (*if holes are not pre-drilled at factory*)
- RTV or butyl sealant

Section 1: Setting up

Unpack the contents of the package and gather the required tools listed above so you can be sure you have everything you need before you begin. In the package you should have the bezel with camera, power/RCA extension harness, wire connectors, zip ties, split loom, and hole grommets for the tailgate and bed.

1. Remove any plastic interior components to allow access to the necessary wires of your video interface device. This may include the side panel of the center console if applicable.
2. Remove your old tailgate bezel - Use the 13mm socket wrench to remove the bottom bolt of the tailgate latch. Pull the tailgate handle up out of the way with one hand and firmly grab the plastic bezel with the other and give it a good tug. Be careful because it has a tendency to bust a knuckle on the way out.
3. All trucks have drain holes in the bottom of the bed, and 2010 and newer trucks already have the hole in the back of the bed. If you already have holes in the center of the bottom of the tailgate and back of the bed, skip to **section 3**. Otherwise, remove the tailgate from the truck as per the factory manual. We will be drilling a hole in the bottom of the tailgate and the rear of the bed for wire passage.

Section 2: Drill the access holes (if not already there)

1. Using a ¼" drill bit, drill a hole in the center of the pickup box end as shown in **IMAGE 1**. **It is important to center it so that the hole can be expanded to 1" without going through the floor of the bed, but also high enough so you can't see the wires when the tailgate is closed.** Once you get the ¼" hole drilled, use your 1" bit to enlarge the hole for the snap bushing.
2. Making sure that the holes will line up, do the same to the bottom of your tailgate or use an existing drain hole.
3. Install the plastic snap bushings. These bushings provide an inside diameter large enough to use the included wire loom to protect your camera cable. **Tip: install a slight amount of RTV to the exposed metal on both holes before installing the grommets to avoid rusting and help secure the grommet.**
4. Fish the camera cable through the tailgate hole you drilled (or the drain hole) and through the hole you just drilled in the bed, then reinstall the tailgate.



IMAGE 1

Note that the example in the photo is using a loom on the camera cable. It adds an extra layer between items placed or loaded into your bed and the camera power wire and protects from chafing. It is highly recommended that this loom be added.

Section 3: Run Wires & Connect Power

1. Fish the camera cable through the center drain hole on the tailgate, then clip the bezel in place and GENTLY pull the excess cable through – BE CAREFUL NOT TO CUT OR NICK THE CAMERA CABLE ON THE TAILGATE AND DO NOT USE EXCESSIVE PULLING FORCE ON THE CABLE.
2. Fish the camera cable through the hole in the back of the bed. Pull the excess wire slack under the truck. Slide the wire loom over the wire and up through the tailgate so the exposed portion between the tailgate and box is protected. Tape the loom in place and zip-tie the camera cable to an existing vehicle harness, leaving enough slack to operate the tailgate properly.
3. To insure a secure, watertight connection (especially important if you launch a boat on a regular basis), source some dielectric grease and coat the male connector with it prior to plugging the male plug into the female socket of the extension harness. Connect the male and female ends of the camera harness (be careful when plugging in the camera connector – it has a keyway and only fits one way!), then tape or heat shrink the connection to seal out moisture.
4. Run the pre-loomed camera harness alongside the factory harnesses on the left side frame rail toward the front of the truck, using the included zip ties to secure it.
5. On all GM trucks, you will find a cable coming through the driver's floor near the front left corner of the driver's seat. We recommend using this grommet for routing your camera cables into the cab.
6. To access this grommet, remove the driver's side sill plate and peel the carpet back far enough to see the top of the grommet (see [IMAGE 2](#)). Carefully pop this grommet out (it helps to push from below). Using a razor knife or side cutters, carefully slice through the outer plastic ring, allowing you to pass the camera power and signal cables through the grommet. Snap the grommet back in the floor. In image 2 you can see that the camera wire(s) are now sharing the grommet with the existing cable. This grommet will have to be resealed using your RTV or butyl tape but wait until the cables are in place (next step) to ensure you have the proper amount of slack at both ends.
7. Route the camera RCA cable under the carpet toward the video interface unit, mirror or radio.
8. As a final check make sure that the cable(s) are now secure from all moving parts under the vehicle and moving freely through the holes created in the box and tailgate. Coil up any excess cable behind the dash or console and secure it with a zip tie. Once secure, use the RTV or butyl tape to seal your floor grommet. Try to seal it from the top and bottom to ensure a good seal and avoid moisture in the cab. Now you can put your carpet and sill plates back together.



IMAGE 2

Section 4: Power the camera and connect to your display

1. Power connections will be made at the Left I/P Junction Block shown in Appendix A. If you have a display system that allows full-time display of the camera, you can wire the camera power lead (red wire) to either the IGN or ACC pins in port "X14". These require .110 female spade connectors (available at almost all auto parts stores). If your display requires a reverse light-activated power source, connect the camera power lead (red wire) to the wire coming from pin 8 in port "X10" (generally dark blue) with the provided red tap connector. Camera ground (black wire) can be hooked to the ground pin in port "X14", or for a better, more trouble-free connection, attach it to any bright metal (not painted) in the vehicle, such as the 10mm nuts that attach the dash structure under the left dash fuse box cover.
2. Connect the RCA cable to the backup camera input of your aftermarket receiver, mirror or other display device and secure the connection.

Section 5: Test

1. Turn on the ignition and place the truck into reverse making sure that the screen displays properly (Duramax trucks will need to be running to activate reverse lights). If so, you're ready for the next step. If not, chances are that something isn't connected properly. Be sure to go over all your connections using a VOM or test light to make sure you have power where and when you need it (i.e. power to the camera when the vehicle is in reverse). Please accomplish the steps in the support section below before contacting us.

Section 6: Reassemble tailgate bezel

If everything tests OK, you can reinstall your tailgate lock (if applicable) and tighten the 13mm bolt on the tailgate bezel. If you do not have the tailgate lock, place a small dab of adhesive or silicone RTV on the back side of the supplied plastic plug before installing it into the bezel to make sure it stays in place.

Be sure you taped or heat shrunk all the connections under the vehicle so that they are sealed from moisture.

Support

We will provide you with excellent support of your new camera. We just ask that try a few things before contacting us:

1. Do you have power at the camera when the truck is in reverse? If not, check that there is power at your reverse trip wire source. In other words, eliminate the harness by testing for power where your harness connects to the reverse trigger wire.
2. Do you have a good ground?
3. Video cables connected and secure (if applicable)?

If you can rule these out, contact us and we will help you resolve the issue.

APPENDIX A:

LEFT I/P JUNCTION BLOCK

