

Installation Instruction VCPRGBGM05 - rev1.5 RGB Interface Harness modification Navigation Radio

Introduction – The following instruction procedure is for the RGB interface to a GM 05 Nav Radio as part of the Webasto Product NAVCam Back-up Camera (VCP-0000220).

In addition, an installer will need to refer to Instruction VCPCAMGM for instructions on installation of the license plate camera and the vehicle harness.

For updates of this and other product installation instructions, please refer to our website at: www.techwebasto.com or contact toll free Webasto's Tech Center at (800) 860-7866.

List of Parts for a VCP-0000220 NAVCam GM '05

- A - License Plate Camera with Mounting Bracket
- B - Camera Connector and Power Supply
- C - RGB Interface (Blue box) and PCB Harness/Radio Connector
- D - 6 meter Body harness
- E - 1.5 m Cable extension
- F - Yellow RCA Video to mini-DIN Connector (including power red/black wiring)
- G - Power Cable from RGB Interface to mini-DIN connector

Components that are relevant to this instruction are C, D, F, and G pictures of which are below for visual reference – please lay out the parts before beginning and be sure that all of the parts listed above were included in your kit. If not please notify your distributor or point-of-purchase.

WARNING – Electronic components such as the GM Nav Radio and the PCB interface can be damaged by static discharge. Take proper precautions to work in an area which is properly grounded and wear a wrist ground strap.

Functional Description – The back-up camera is designed to automatically engage when the car is placed in reverse with the ignition in either the ACC or ON position.

The body harness is connected to the camera and to the Yellow RCA – mini-DIN connector and the camera power harness. In addition the body harness has a red/black lead which is connected to the reverse light leads in either the of the rear light wells. The RGB interface box pictured below, has a red/black lead which is connected to the corresponding red/black leads on the RCA – mini-DIN. When the vehicle is placed in reverse power is initiated from the reverse lights, carried across the mini-DIN harness to both the camera and the RGB box. When the RGB box receives power a signal is sent to the PCB attached to the radio transferring the picture to the NAV radio.



**Video Input from Camera
12 Volt Power Connector**



See page 7:
RGB 15 pin
connector

**RGB Female Connector
Brightness Control and RGBS switch**

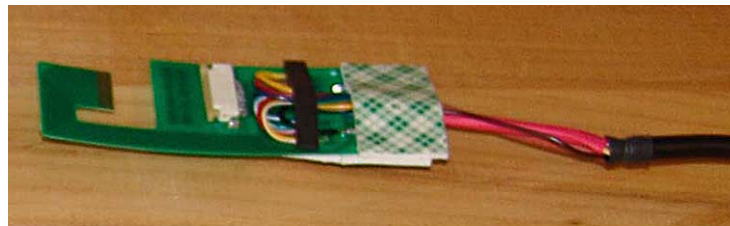




Figure 1: Place the radio on a stable work surface – the front of the radio to your left and the bottom of the radio facing up. Remove the bottom plate carefully with a flat head screwdriver. Around the rim of the bottom plate on the sides are small beaded lock points – 2 on each of the three sides (↑). Begin at the one at the top left of the radio (A) by prying the head of the screwdriver under the plate (see picture below) and twisting slightly and leveraging up until the plate comes loose. Repeat the steps on one of the lock points on the back of the radio (B) – usually only two or three are required till the bottom plate springs free exposing the bottom of the radio circuit board.



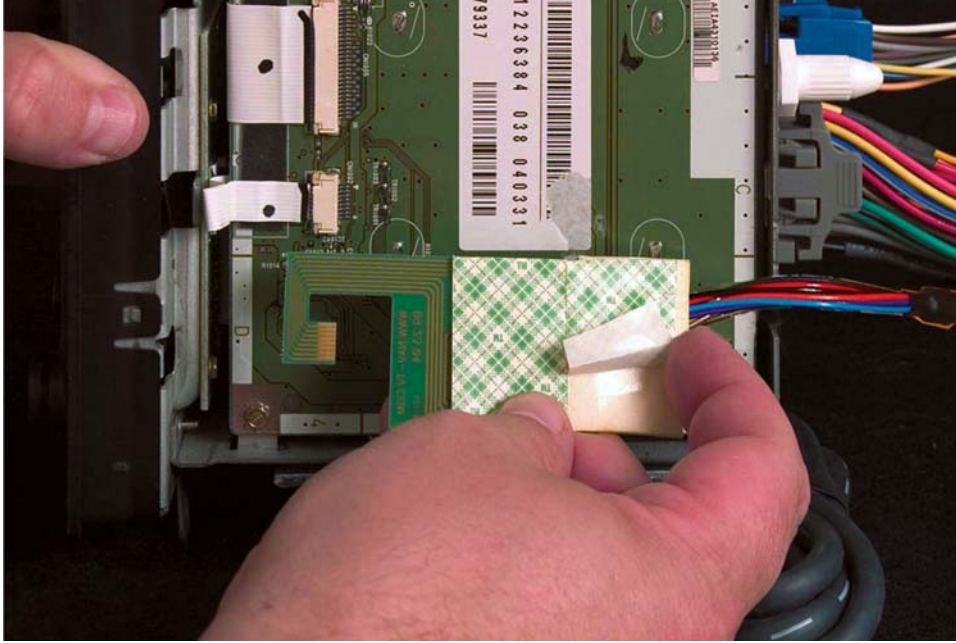


Figure 2: Just to familiarize yourself with the layout – the RGB circuit board or PCB will be positioned roughly in this way with the leads running out of the back of the radio through a small slot. The picture above has the PCB flipped – eventually it will be aligned the same way only upside down. First though peel about half of the tape adhesive back – this will aid later when the PCB is in place to remove the tape and affix the PCB to the radio. Once this is complete set the PCB aside so that we may continue with the steps to replace the ribbon connector.

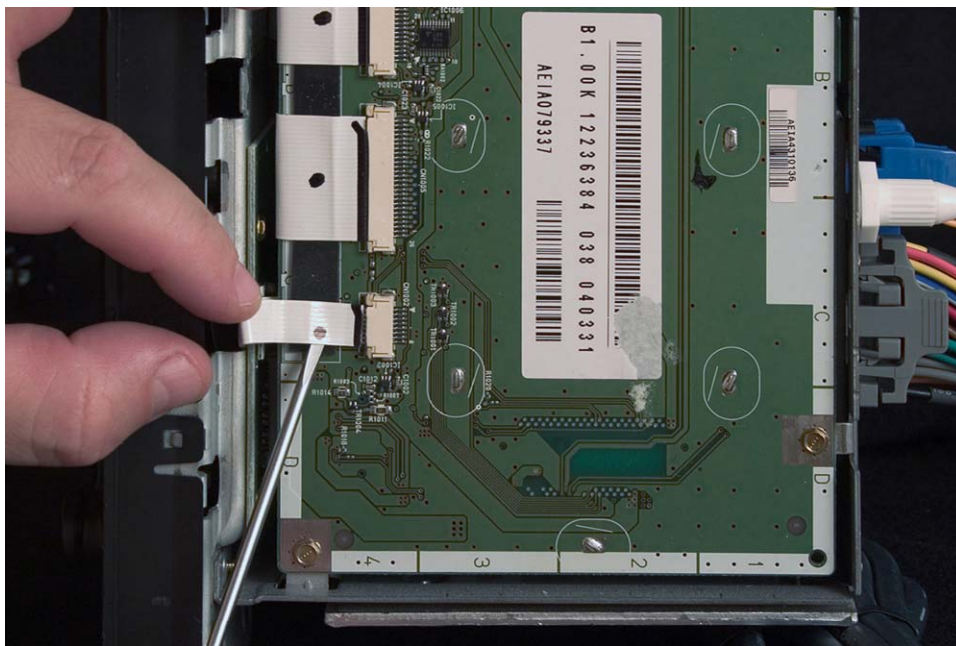


Figure 3: There are three ribbon interfaces (white circuit strips) on the bottom of the radio. The first step is to remove the ribbon from the lock connector. Gradually pry the ribbon from the black adhesive tape using a small flat headed screwdriver. You may need to pull a small portion of the ribbon from below the circuit board – do this carefully but the ribbon has 4 or 5 cm of play in it. In some cases a portion of the black adhesive will come loose from the circuit board and remain on the bottom of the ribbon – this is not a problem.

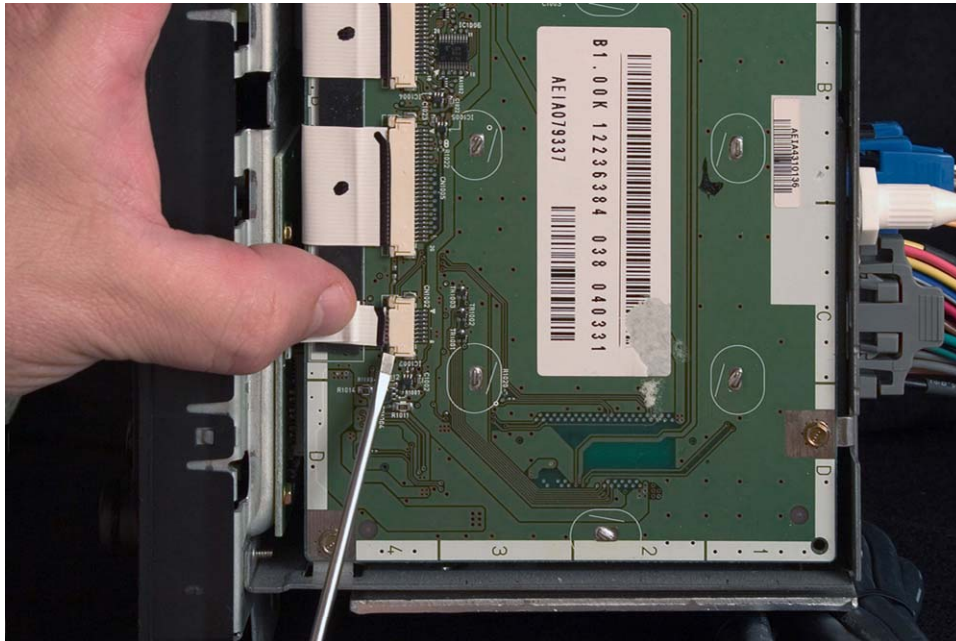


Figure 4: The screwdriver in the above picture is pointing to a lock tab on the connector housing – a second tab is located on the opposing corner. These tabs loosen by carefully inserting a small jewelers screwdriver behind the tab gently loosening it (it pulls out a couple of mm's) Repeat the procedure with the second tab – when both tabs are loose gradually pull the ribbon free being sure that the tabs do not lock and damage the end of the ribbon. Also be careful that the ribbon does not re-attach to the black adhesive tape on the circuit board. Once the ribbon is free clean any black adhesive tape off of the bottom since this will interfere with attaching it to the RGB circuit interface.

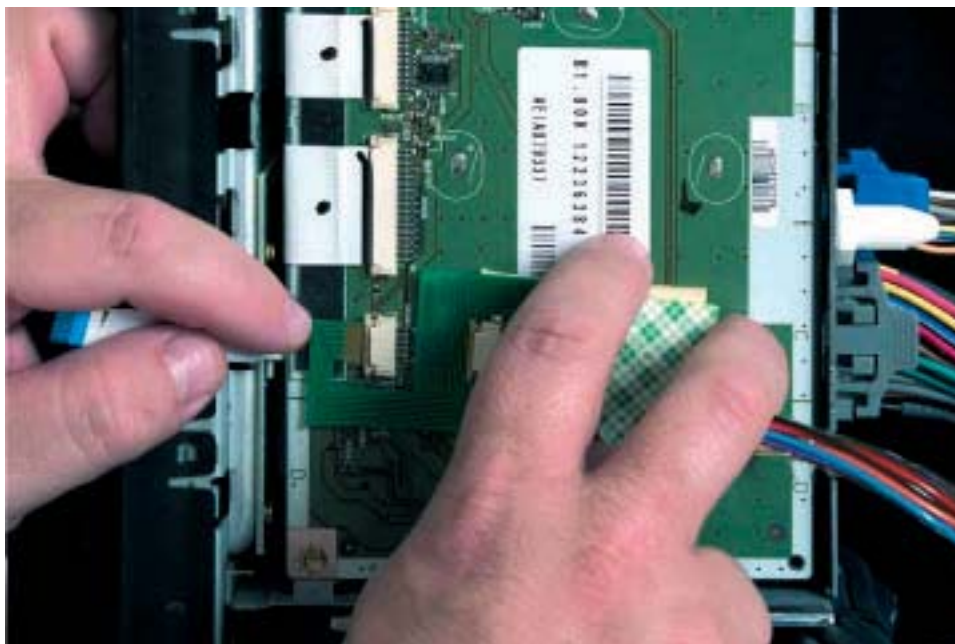


Figure 5: Position the RGB interface circuit as shown above – the green angled arm is flexible and will allow you to slide it into the white housing with lock tabs while keeping the body of the circuit board from sticking to the radio. Position the grey (black) leads through the opening at the radio as shown above – they will be tight but fit in such a way that they will not be easily pulled when replacing the radio.

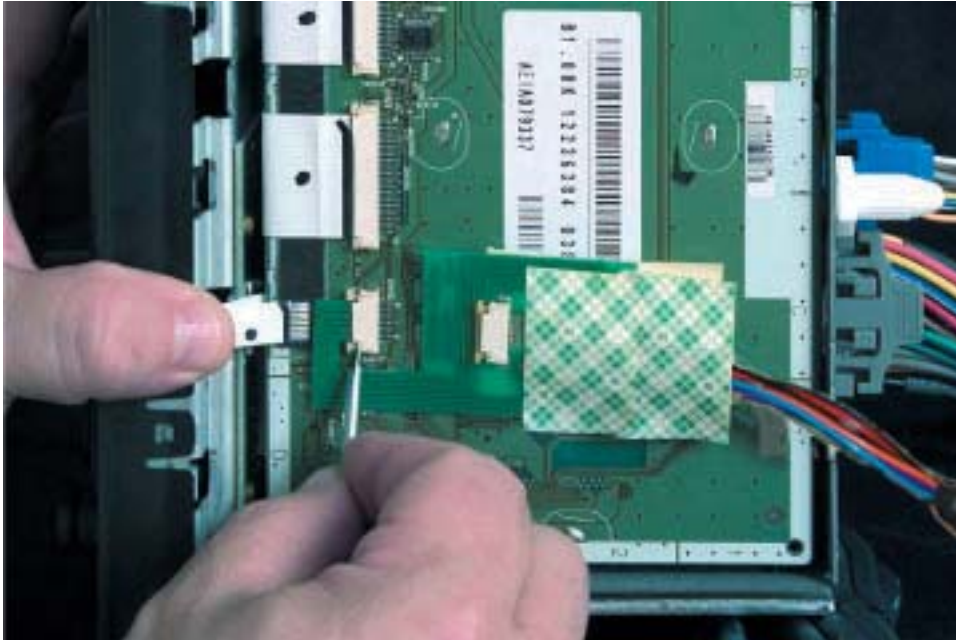


Figure 6: Once the ribbon connector is inserted into the housing – carefully push the tabs back in to secure the ribbon. Reach under the RGB board and peel the remainder of the green tape off so that the board can be lightly pressed onto the surface of the radio and secured in place. It may not be necessary to peel all of the tape off – the adhesive will keep the RGB interface in place and by not removing all of the tape it will make removing the interface easier in case the radio must be removed and sent in for maintenance at some later point.

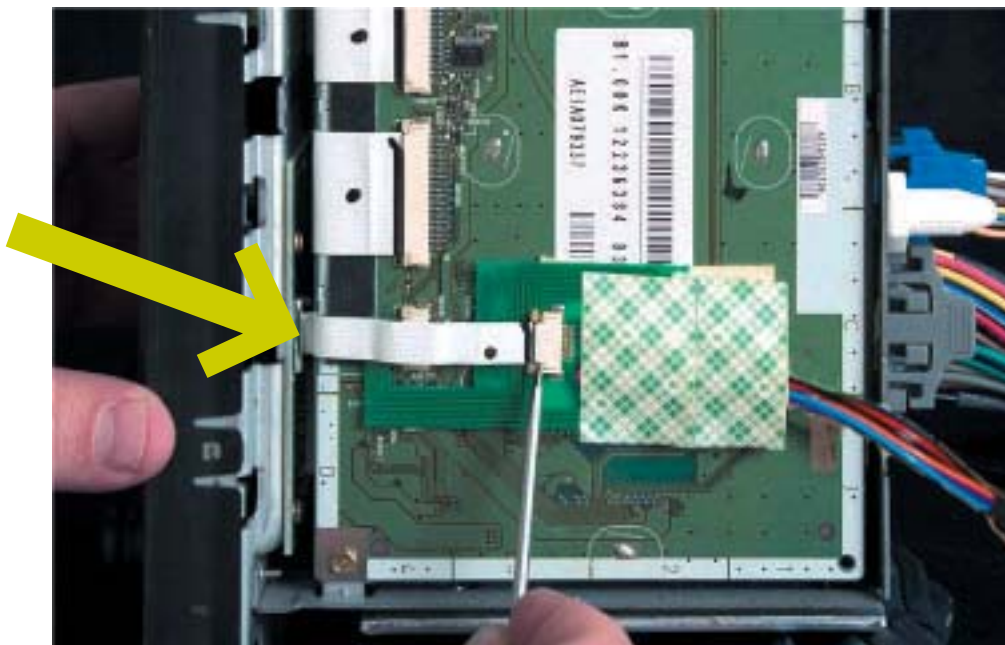


Figure 7: Next it is necessary to connect the ribbon from the radio to the RGB interface – to do so loosen the tabs as shown before on the housing on the top of the RGB interface and slide the radio ribbon into the slot. Once the connector is seeded properly, lock the tabs in place making sure the ribbon will not work loose. Any loose ribbon cable should be carefully pushed back (A) under the radio circuit board so as not to be damaged when the bottom radio plate is replaced.

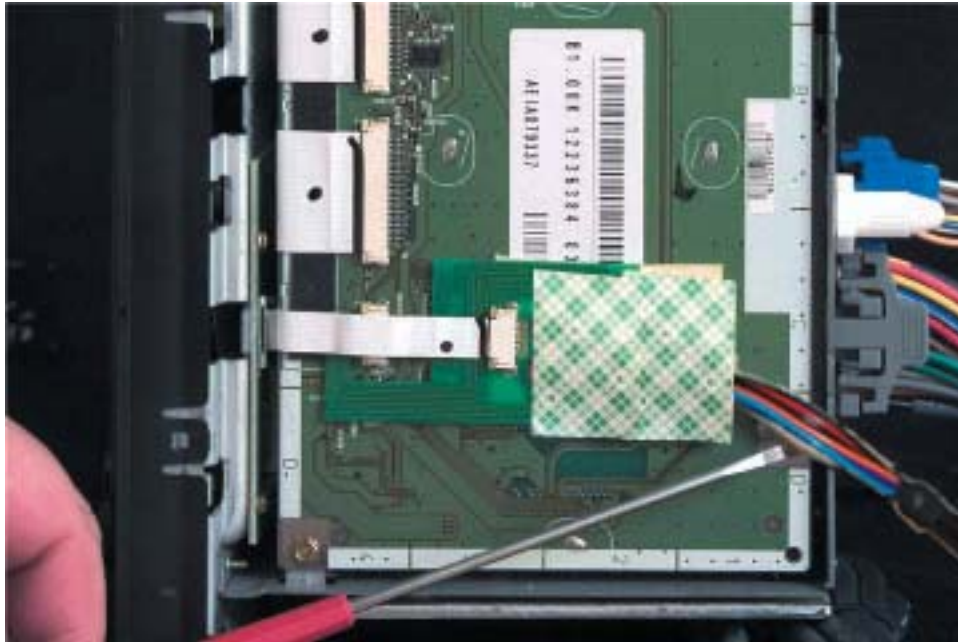


Figure 8: re-check all of the tabs are locked and the connectors are seeded properly. Check the cable to the RGB interface is sitting correctly in the small opening at the edge of the radio. At this point return the bottom plate to the radio – popping the plate into position until it is secure. The radio is ready to be replaced after the interface plug (A–below) is connected to the RGB interface box shown on page 1.

Proceed with the remainder of the Back-up Camera installation Process as show in instruction – VCPCAMGM.



Interface Plug A -
See page 1: RGB
female connector

Figure 9: The completed interface connection – now plug connector A to the RGB interface referred to on Page 1. The radio is then ready to return to the dash of the vehicle.