van Aaken SmartBox™ C3.1 Installation Instructions

Vehicle: Chrysler Dodge RAM
Engine: 5.9L 6 Cylinder
Year: 2003 – 2004

Our Website www.vanaaken.com has further information on all of our new products.

Every effort has been made to ensure that these installation instructions are accurate and complete. If during installation of your van Aaken SmartBox™ C3.1 you experience any difficulty please contact your supplier or van Aaken Developments directly, with the information about purchasing the product. van Aaken Developments contact details are at the bottom of every page.

The van Aaken SmartBox™ C3.1

The van Aaken SmartBox™ C3.1 accurately alters fuel delivery with reference to engine speed and load, giving a dramatic increase in power and torque throughout the rev-range. The three-position switch gives the user the choice of easily adjusting the power level from inside the vehicle.

Kit Contents

- van Aaken SmartBox™ C3.1
- Plug-in Wiring Loom
- Self-adhesive Velcro strips
- Cable Ties
- Installation Instructions
- 3 Position Toggle Switch

Installation – A quick explanation

Installing the van Aaken SmartBox™ C3.1 is a very simple task that should take less than 5 minutes. Do not be put off by the length of the explanation on the following pages. The steps set out are to ensure ease of fitting and to help avoid accidental interference with other components.

To fit the van Aaken SmartBox™ C3.1 simply unplug one connection on the vehicle and then plug the van Aaken wiring harness between the disconnected vehicle plugs. You must then mount the box using the supplied self-adhesive strips.
### Before You Start

1. Switch off engine and ignition.
2. Apply parking brake and select neutral or park.
3. Remove ignition key from the ignition switch

### Additional items required to fit the van Aaken SmartBox™ C3.1:

- Wire cutters to trim the supplied cable ties.
- A cleaner suitable for safely removing dirt and oil from plastic.
- 4 mm Hexagon tool (Allen Key)
1) How is the module installed?

The van Aaken SmartBox™ C3.1 connects to the vehicle through an ECU plug located on the side of the engine.

The ECU is easily accessible. It is located on the driver’s side of the engine block below the air intake manifold elbow. Access to it is easiest from the top of the engine bay.

On the van Aaken SmartBox™ C3.1 wiring harness (loom) there is both a male side and a female side of the 60-way ECU (Engine Control Unit) plug. This will connect to the ECU plug that is closest towards the front of the engine.

The smaller Black 12-pin plug on the opposite end of the loom is used to connect the loom to the van Aaken SmartBox™ C3.1 unit.

2) Connecting the Loom

Locate the 60 way plug on the ECU. Using a 4mm hexagon key remove the OEM plug from the housing.

The van Aaken SmartBox™ C3.1 wiring loom can now be fitted. Plug the original vehicle plug into the van Aaken SmartBox™ loom and tighten the hexagon bolt. Now insert the remaining loom connector into the ECU and tighten the hexagon key. Make sure that both plugs are seated correctly and firmly in place before and after tightening.

Bring the van Aaken SmartBox™ C3.1 braided wires with the attached 12-pin Black plug up from the ECU so that the unit can be connected and mounted on top of the fuse box cover. Make sure that the braided wire is passed behind the intake manifold (towards the passenger compartment).

You are now ready to mount the unit.
3) Mounting the Unit

The unit should be mounted on top of the fuse box at the front corner of the engine bay.

Attach the unit in place using the supplied self adhesive Velcro. The area on the vehicle where the unit is to be attached should be thoroughly cleaned first to remove all traces of oil, engine lacquer or dirt.

The black 12-pin plug on the van Aaken SmartBox™ C3.1 loom should be led over to the unit and firmly connected to the plug on the van Aaken SmartBox™ C3.1 unit so that both catches on the sides of the plug are seated into place.

The wire should be secured with cable ties so that it cannot touch any hot, moving or sharp objects in the engine bay.

4) Toggle Switch Installation and Connection (Optional)

The supplied toggle switch may be installed in any suitable place within the vehicle cab. The wires from the switch should be passed through the bulkhead using a rubber grommet to seal the hole and protect the wires.

Make sure that the switch wires cannot get entangled in any moving parts behind the dashboard such as heating controls.

Connect the 2-pin plug on the switch loom to the remaining plug on the main loom, which is located at the end nearest to the van Aaken SmartBox™ Secure the wires using the supplied cable ties.

There is a small groove (keyway) cut into the threaded metal section of the switch. This groove can be used to decide the orientation of the switch.

Power positions are:
- Switch towards the keyway: Full power position
- Switch in the middle: Lower power position
- Switch Away from the keyway: Unit is turned off (no power gain)

Switch Operation
- If no switch is connected to the van Aaken SmartBox™ F the default setting will be Power 2 – it will give maximum extra power all the time.
- If the included 3-position switch is connected the unit can be switched between Off, Power 1 and Power 2. Power 1 will typically give half the gain of Power 2 but this is entirely dependent on the tuning file programmed into the unit. If in doubt about the function of each switch position please contact your SUPPLYING dealer.
5) After Installation and Before Starting the Vehicle – Please Read!

Please check:

- All connections are firmly made
- All wiring is adequately secured so as not to come into contact with sharp edges or moving parts.
- The van Aaken SmartBox™ C3.1 is securely mounted.
- No tools have been left in the engine bay.

Van Aaken SmartBox™ C3.1 Installation is now complete

The van Aaken SmartBox™ C3.1 for Chrysler Dodge RAM is a high performance product that will change the operating characteristics of your engine. When using this product, as with any performance enhancement product, we would strongly recommend the use of EGT (Exhaust Gas Temperature) and Manifold Boost pressure gauges to monitor conditions within the engine.

Start the vehicle in the usual manner.

You are now ready to experience van Aaken SmartBox™ power!

In the unlikely event that the vehicle will not start

1. Check all of the plug-in connections to make sure they are pushed all the way home.
2. Ensure that the van Aaken SmartBox™ C3.1 wiring harness has not been accidentally damaged.
3. Make sure that no other connections in the engine bay have been disturbed accidentally.

If you can find nothing wrong and the vehicle will still not start, contact your supplier or contact van Aaken Developments directly stating where and when your van Aaken SmartBox™ C3.1 was purchased.
Warranty Statement

van Aaken Developments Ltd
12 Month Warranty Statement

van Aaken Developments Ltd (vAD) warrants to the original purchaser that any parts purchased shall be free from defects in material and workmanship. A defect is defined as a condition that would render the product inoperable. This warranty does not cover deterioration of plating, paint or any other coating. vAD liability is limited to the repair or replacement, at vAD's option, of any warrantable product returned prepaid with a complete service history and proof of purchase to the factory. A valid proof of purchase is a dated bill of sale. Repaired or replaced product will be returned to the customer freight collect. Accepted warranty units which have been replaced become the sole property of vAD.

Product returned for warranty determination must be accompanied by a complete service history, including details of the circumstances under which the defect occurred, and a Return Material Authorization (RMA) number obtained in advance from a vAD customer services representative. vAD will be the final authority on all warranty decisions.

This warranty shall not apply to any unit which has been improperly stored or installed; subjected to misapplication, improper operating conditions, accidents, or neglect; or which has been improperly repaired or altered or otherwise mistreated by the owner or his agent.

This warranty shall terminate at the end of 12 months in service with the original user. Labor cost incurred by the removal and replacement of a vAD product, while performing warranty work, will be the responsibility of the vehicle owner, in no case does the obligation of van Aaken Developments Ltd exceed the original purchase price of the product as indicated on the original bill of sale.

Except as set forth in this warranty, vAD disclaims any implied warranty, including implied warranties of merchantability and fitness for a particular purpose. vAD also disclaims any liability for incidental or consequential damages including but not limited to, repair labor, rental vehicles, hotel costs or any other inconvenience costs. This warranty is in view of all warranties or guarantees, either expressed or implied and shall not extend to any customer or to any person other than the original purchaser residing within the boundaries of the continental U.S or Canada.