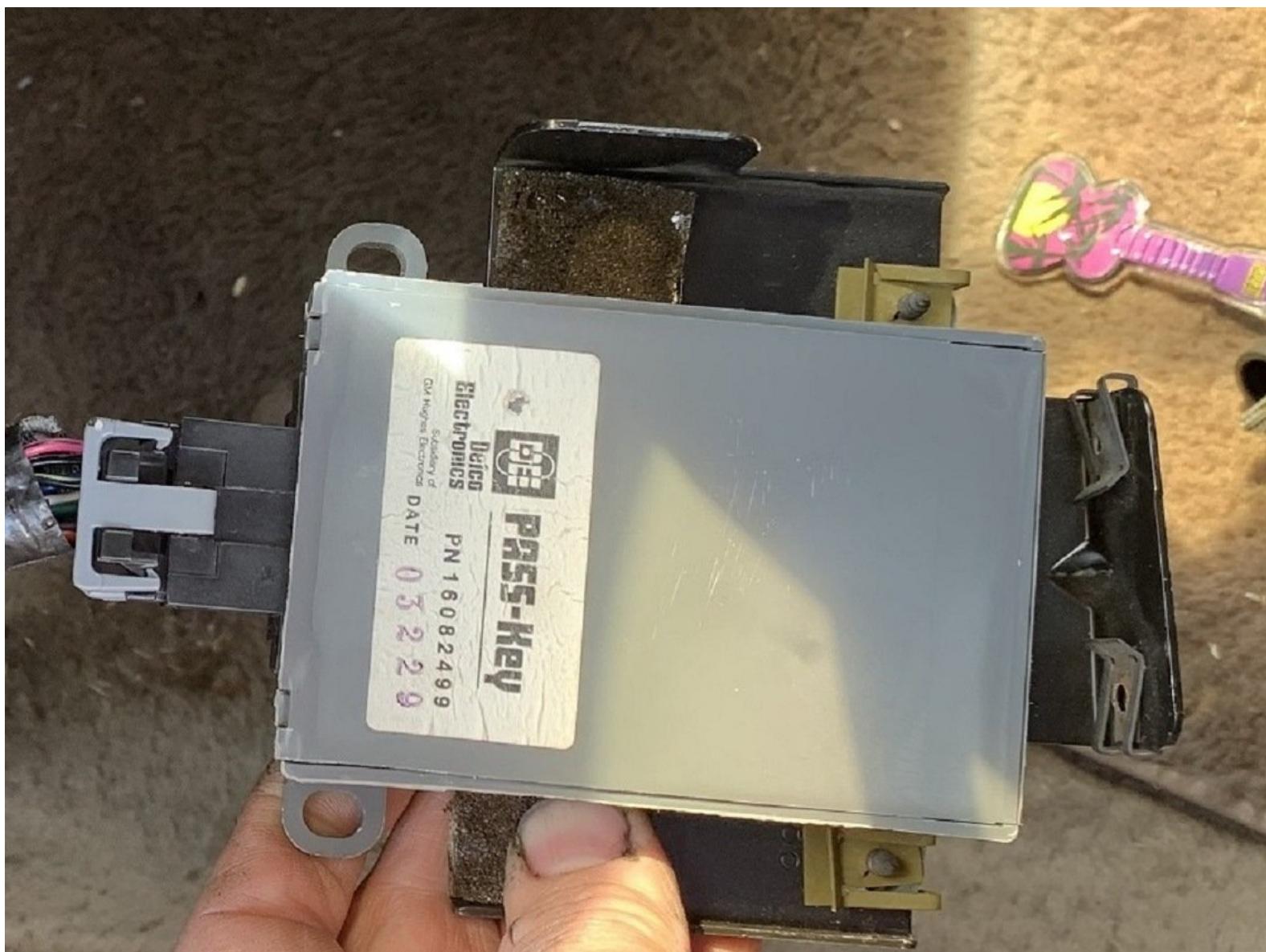




# How to repair the GM VATS control module

Repair of the intermittent No Start of GM vehicles with the VATS system that uses the key with the black resistor.

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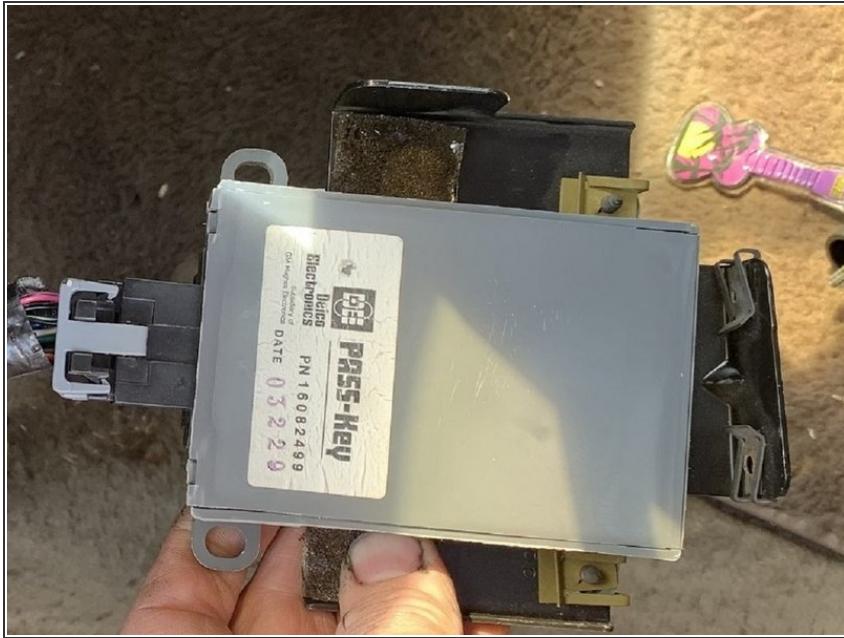
## INTRODUCTION

This repair is for GM vehicles with Vehicle Anti Thief System (VATS) or Pass-Key systems that have the black "Chip" in the key and intermittent No Starts with the dreaded 10 minute wait. If you have a GM vehicle that has the no start issue you can try pulling the module down from under the dash and tap on it with you finger or slightly twist the module box with it still plugged in. If the vehicle starts after doing that I have found it may have a diode in the module with a bad solder joint. Remove the module and remove the board from inside. On the backside of the board I generally re-flow the solder on all the pins on the connector. I then re-flow the solder on the 7 larger diodes and the 2 larger blue color resistors located between the diodes. Most likely you will find that one of the diodes will not allow the solder to flow. You have to remove that diode using a solder sucker to get all the solder from the connections. Be careful not to damage the eyelets around the holes the diodes are mounted thru. The diode will come out easily if there is no solder, so if you are using force then something is wrong. Try to solder the diode back into place on that connection and use the solder sucker again until the diode comes out easily. Clean the board with flux and a tooth brush and maybe a pencil eraser being careful not to damage the eyelets. Then solder the diode back in and if the solder flow smoothly then the repair is finished. Reassemble and reinstall. It is plug and play so start it up.

## TOOLS:

- 7mm Deep Socket, Ratchet, Small brush(Toothbrush), Small Solder Iron, Solder, Flux, Pencil that has an eraser. (1)

## Step 1 — Remove the module



- Picture #1: Remove the VATS MODULE

## Step 2 — Open the module cover



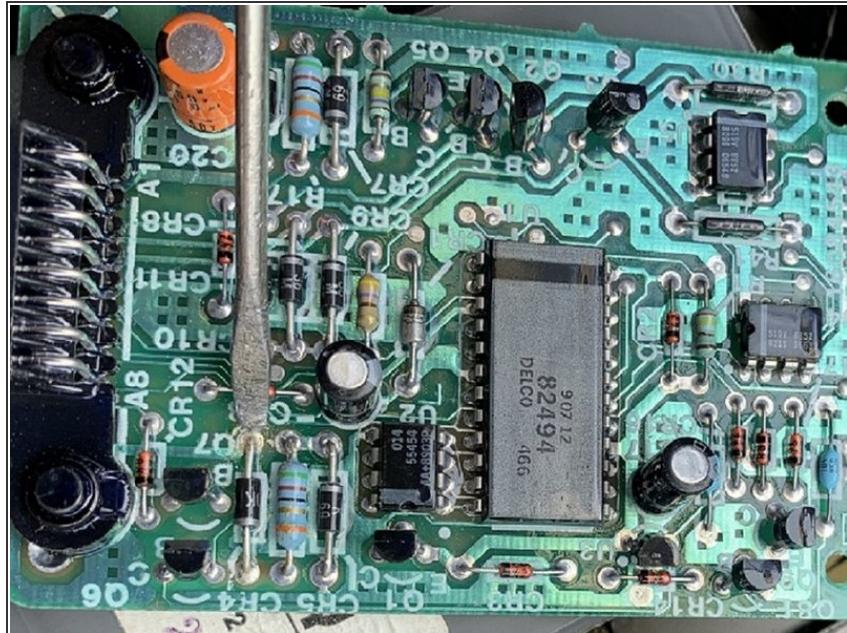
- Open Module being careful not to break off these two tabs

## Step 3 — Separate board from the box



- The board lifts straight up out of the box

## Step 4 — Re-solder. You will find this joint will not easily accept solder.



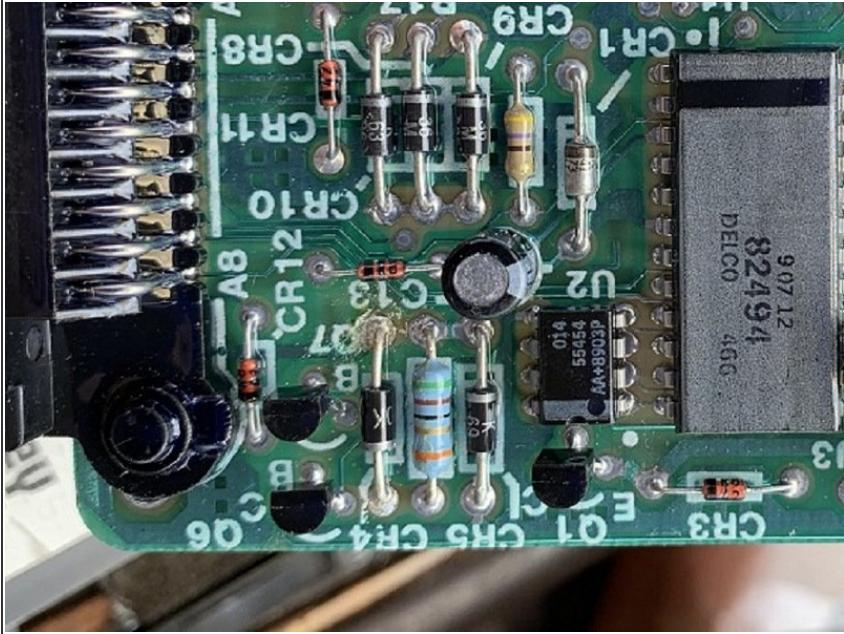
- The tip of the screw driver is at the joint that has failed. Generally I re-flow the solder on all 7 of the larger diodes and both of the blue color resistors in between the diodes. I also re-flow all the joints on the black wire harness connector.

## Step 5 — Clean the board



- If the solder will not flow smoothly on any of the joints, the joint will require cleaning. Mark the direction the diode is in and remove the solder from the joints using a solder sucker. Remove diode. Add flux and brush the area being very careful not to damage the eyelets on the board.

## Step 6 — Reassemble and start the vehicle.



- You may even have to use a pencil eraser. Be sure not to damage the eyelets on the board. After it is clean reinstall the diode in the same direction (silver band toward the edge of the board) and solder in place. Place the board back inside the box and close the lid. Plug it into the harness and start the engine.

To reassemble your device, follow these instructions in reverse order.