



**BUICK REGAL/GRAND NATIONAL INSTRUCTION BOOKLET**





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## **Buick Grand National mounting system supplemental.**

Thank you for choosing NVU as your source for specialty instrumentation and mounting solutions. This kit is designed for Buick Grand National vehicles and while the bracket installation is basic, it does require some modifications to the dash and back brackets.

**Pre-wired kits:** All connections have been communized and have been broken down into their basic components. Each gauge will require one sender connection, and each lamp will require at least one connection to power or ground. The kit is designed to be universal, and we have done our best to correspond each function to the original vehicle or you may use the kit as a stand-alone and wire up each function as a standard universal kit would be.

**Build-it-yourself kits:** NVU recommends using a minimum of 20 ga wire for wiring your kit up. To make everything as simple as possible, commonize as many wires as possible (tie all of the grounds, power, lights, etc) together and run a junction out to the main connection at the vehicle. Be aware that some of the warning lamps have a 12v+ and some a ground trigger.

### **Senders:**

**Temperature and oil pressure:** Avoid Teflon tape or sealant but if required to prevent leaks, keep the sealant at the top of the threads so that the sender will "bite" into the base engine material for a good ground. Stepper motor gauge senders have a "floating" ground, connect the black or ground post to a good chassis/engine ground. Short sweep kit senders ground through the threads.

### **Tachometer:**

All tachometers should operate off of any GN coil which has a 3 PPR (pulse per revolution) 5V sq wave output. The tachometers are pre-set for 6 cyl operation (3PPR) If an aftermarket ignition or CDI box is used make sure you pick up the tach signal from the CDI box output

**Speedometers:** The stock GN computer outputs a 2,000 PPM signal, A signal multiplier or other sender (such as a GPS sender) will be required for the proper amount of PPM. Short sweep kits will accept a 2,000 PPM input and do not require any additional equipment.

**Boost sender:** The boost sender (MAP) can read anywhere in the line but make sure it picks up as close to the manifold as possible. The sender requires 12v+ and a ground. Run the sender wire like any other sender to the boost gauge input.

**Fuel sender:** All GN packages have a 0-90 fuel gauge (factory match)

**Voltmeter/warning lamp/charging.** The voltmeter has an integrated warning output on stepper motor gauges. It is already wired to the warning lamp on the panel. You may program the warning lamp to turn on to what level you see fit by following the instructions in the stepper motor booklet. To charge the battery, all pre-wired kits have a 470 ohm, ½ watt resistor tied into the alternator input wire and then into a 12v key on wire (pink,blk) wire-it yourself kits should also have this resistor wired in, to trigger the battery lamp simply tie in the wire to the same 12v+/ground.

## Installation:

Remove stock bezel, window area will need to be trimmed to attach trim mask. The trim mask is the black/silver piece of trim. Se the mask as a guide for trimming. The trim mask can be attached with a thin bead of silicone. This allows for good adhesion and flexes during cold/heat cycles. The masking tape side goes toward the dash, the brown paper side is out. Leave the brown paper side out until installation is complete to protect the acrylic from adhesive and scratches during installation.



FIG 1. TRIM MASK INSTALLED (ARROW)

## Bracket installation:

Remove original cluster. Trim all material needed to clear cluster and bracket. The center support on the carrier will have to be removed. It will be flimsy, don't worry the new bracket will stiffen the assembly again. Install cluster using 4 each 8x1" sheet metal screws.

Wiring, wire according to wiring diagrams. There are 3 plugs on pre-wired kits make sure you connect 1, 2, 3 to its respective plug. You may use a Casper board/connector for cleaner plug-and-play solution but its not required.

Replace bezel and enjoy.

BELOW FIG 2. BRACKET INTALLED AFTER REMOVING AND CLEARANCING STOCK CARRIER (GAUGES REMOVED FOR CLARITY)





FIG 3: CLUSTER INSTALLED IN STOCK CARRIER WITH 4 EA #8X1" SCREWS

Replace bezel and enjoy.

Wiring the indicators in the panel:

Each indicator is a 12-V LED light. Wire the red to a power source and the black is ground