

# TECHNICAL INFORMATION

## Turbo Buick 3.8L Crank Sensor

There were three different styles of these Hall-Effect crank sensors produced for the turbo 3.8L engines. *The Hall Effect device is a solid-state switch that outputs a ground signal when active.* The first design had a wide sensor housing with a molded-in pigtail terminated by a Weatherpack connector. The pins were designated A-Positive, B-Signal and C-Ground.

The 1984/1985 sensor was identified by the extended casting on the pickup end along with the attached pigtail and Weatherpack connector. Note that GM used the green wire as a signal wire, black as a ground, and the gray/red stripe wire as a positive feed for the sensor. **This color code is the standard GM protocol.**

1984-1985 Crank Sensor



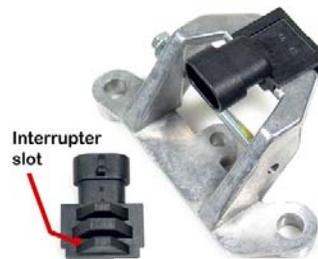
Early 1986 Sensor Ass'y.



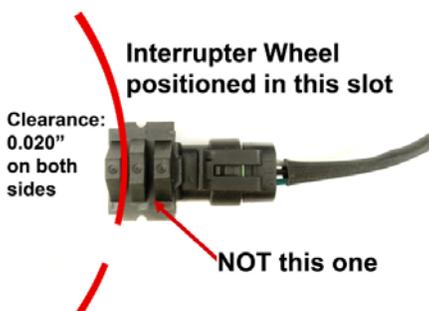
Early production 1986 vehicles used a modified version of this sensor with a Metripack molded-in connector. This design used the same mounting bracket from the original design. However, this version was prone to failure due to loosening of the components which were responsible for holding the sensor into place.

Here is the current design using a smaller sensor and narrower bracket. The narrower bracket simplifies design, reduces part count, and minimizes failure due to loosening mounting components. With this design, the sensor stays in place and is less prone to loosening.

Late '86 to 1989 Sensor Ass'y.



Note the difference between the early design bracket (left) and the current design (right) using the narrower mounting jaws.



Important details when installing the sensor: Interrupter passes thru slot that's furthest from the connector. Also, note wire colors for 1986 and newer: The green wire is now the positive feed and gray/red wire is the signal – different than the 1985 color specification and no longer conforms to the standard GM protocol for wiring designations.

1986-1989 turbo Crank Sensor

