



Countries: CANADA, UNITED STATES, MEXICO
Availability: ISIS, Bus ISIS, FleetISIS, IsSIR
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Coding Information

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Title: PicoScope Wheel Speed Sensor Test

Applies To: All International / IC and Other Makes & Models

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

08/19/2022 - Initial Article Release

DESCRIPTION

This document was created to guide a technician through the proper steps when diagnosing a wheel speed sensor concern.

SYMPTOM(s)

ABS, stability and traction control faults, sensor drop-out, intermittent / false activation, wiring harness chaffing, tone wheel corrosion / rust, damaged teeth, sensor gap, wheel bearing adjustment or other related concerns within the system.

SPECIAL TOOL(s) / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
PicoScope	1211210		

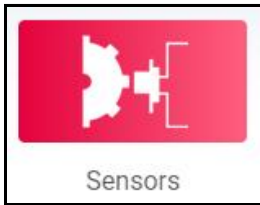
DIAGNOSTIC STEP(s)

1. Open PicoScope software.



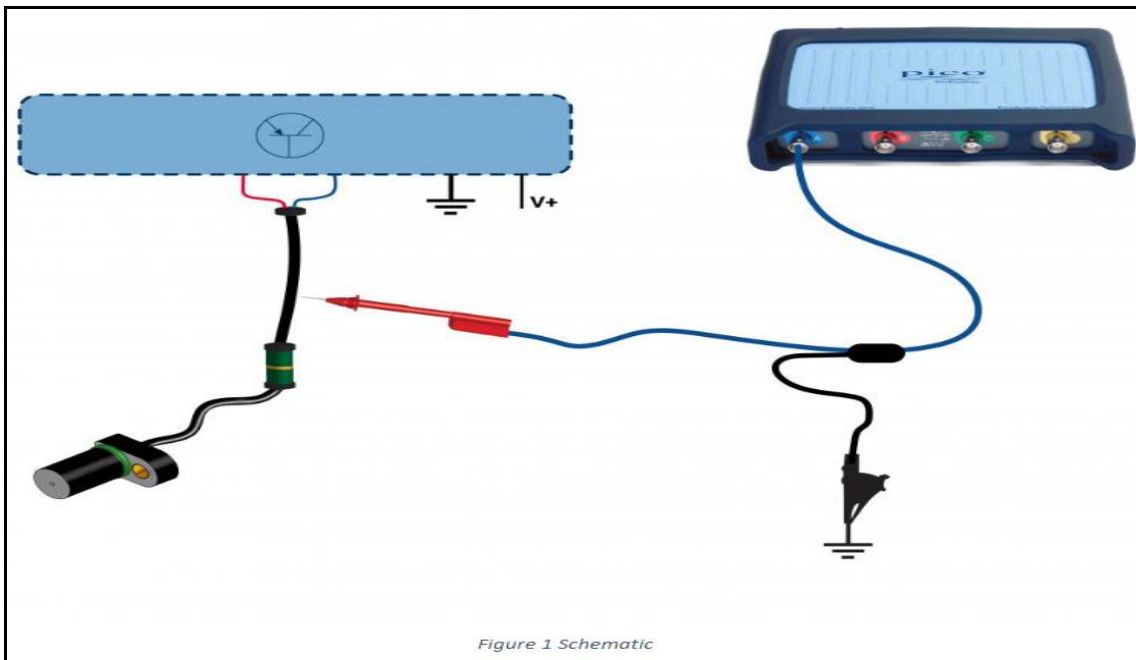
2. Open Sensors.

Note: Prior to installation of the PicoScope identify what type of sensor is installed.



3. Install the correct PicoScope cable and terminals to probe the sensor in question.

Note: Pico can analyze up to 4 wheel speed sensors at one time.



4. To begin operation move your cursor and tap on **RUNNING**.



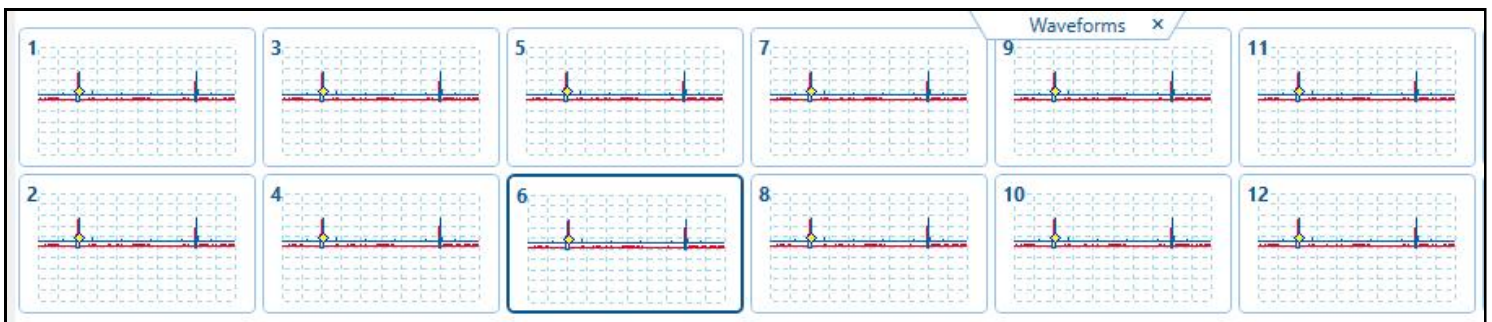
5. Verify ABS signal by rotating the tire by hand or with a road-test. After the concern has been identified move your cursor and tap on **STOPPED**.



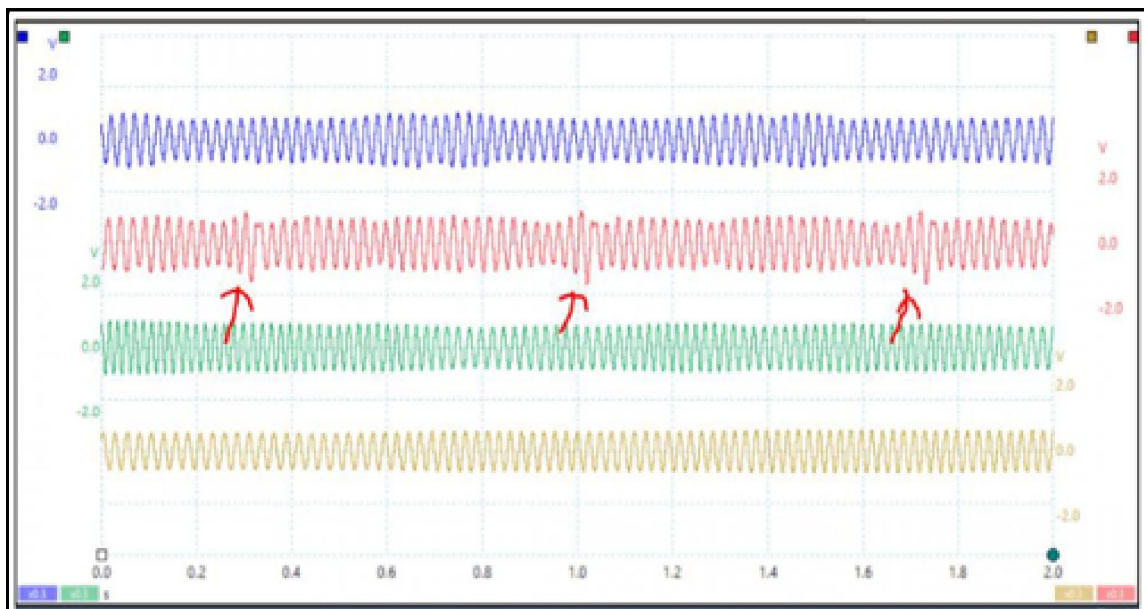
6. Review recordings tap on **WAVEFORM** see *examples below*.

DATA ANALYSIS

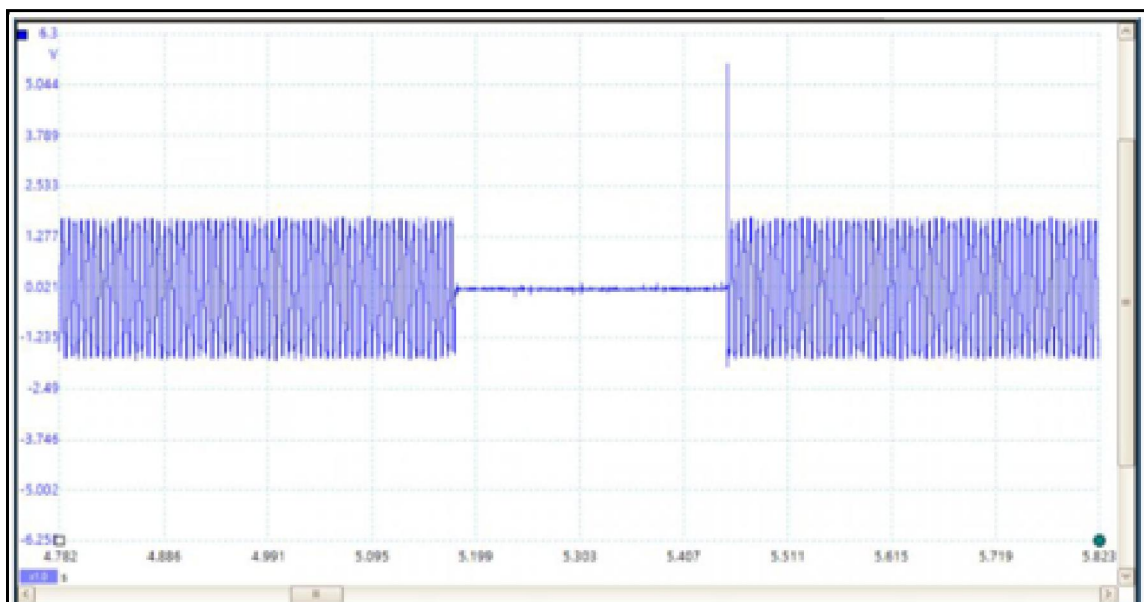
Review each recording to help identify when a concern occurs by expanding out each graph and adjusting **time and division**.



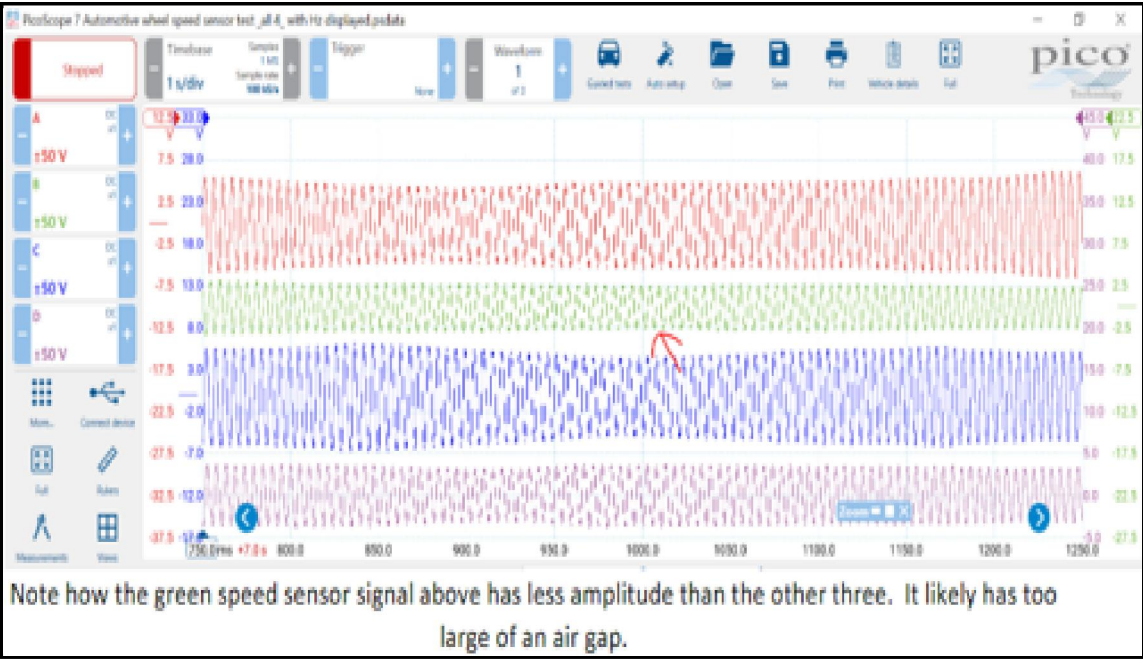
Note: The frequency of the sensor's AC signal is directly proportional to wheel speed. AC voltage is also proportional to speed, but voltage is not used to determine speed. It is only an indication of AC signal strength. The amount of AC voltage generated by a specific speed sensor depends on the distance, or "gap" between the tip of the sensor and the surface of the exciter. Voltage increases as the sensor gap decreases.



The red speed sensor above has a problem- likely in the tone ring



The speed sensor signal above has an interruption in the signal to the ECM



WARRANTY INFORMATION

Warranty Claim Coding:
Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):
Refer to the [SRT Manual](#) for Repair Times if none are present refer to T-time policy.

OTHER RESOURCES

[Master Service Information Site](#)

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