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Title: PicoScope Test 5V & 12V Intermittent Open and Short Circuit Diagnostics

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 procedure was created to guide a technician through the proper diagnostic steps of locating intermittent electrical concerns with 5 volt and 12 volt and sensor signal circuits. The steps listed can be completed during a vehicle road-test or wiggle testing of a wiring harness while the vehicle is stationary.

SYMPTOM(s)

Intermittent operation of electrical accessories and or components that are setting active, healing and pending fault code(s) or other symptoms.

SPECIAL TOOL(s) or SOFTWARE

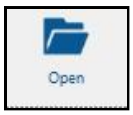
Tool Description	Tool Number	Comments	Instructions
PicoScope	1211210		
Breakout Adapters	Engine & Model Dependant		

DIAGNOSTIC STEP(s)

1. Open PicoScope software.

2. Install Pico test leads and test probes.

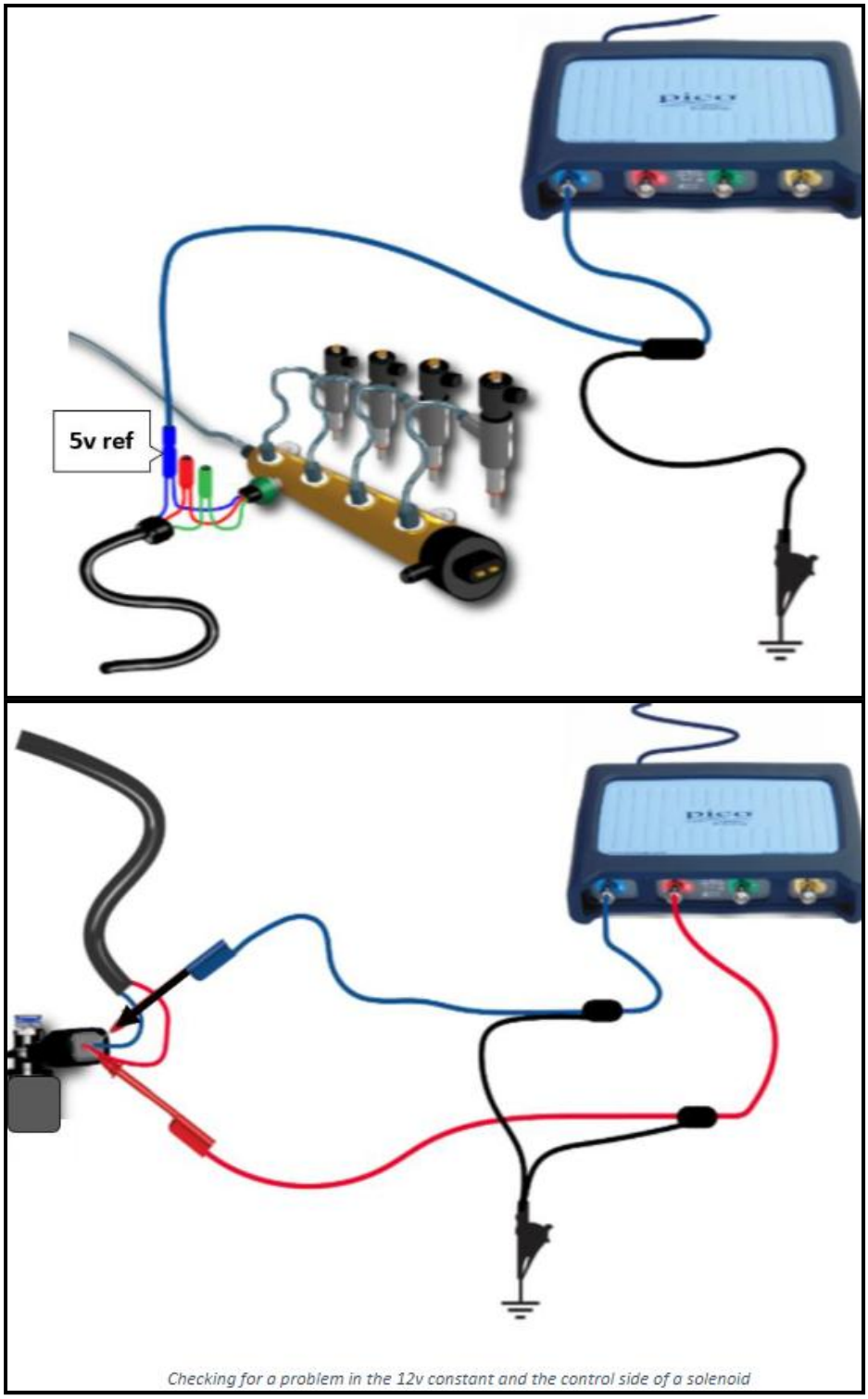
3. Open folder and load 5v or 12v Intermittent / Short file.



4. Connect the PicoScope to electrical circuits that are in question.

Example: 5 volt sensor testing

Example: 12 volt component testing



Checking for a problem in the 12v constant and the control side of a solenoid

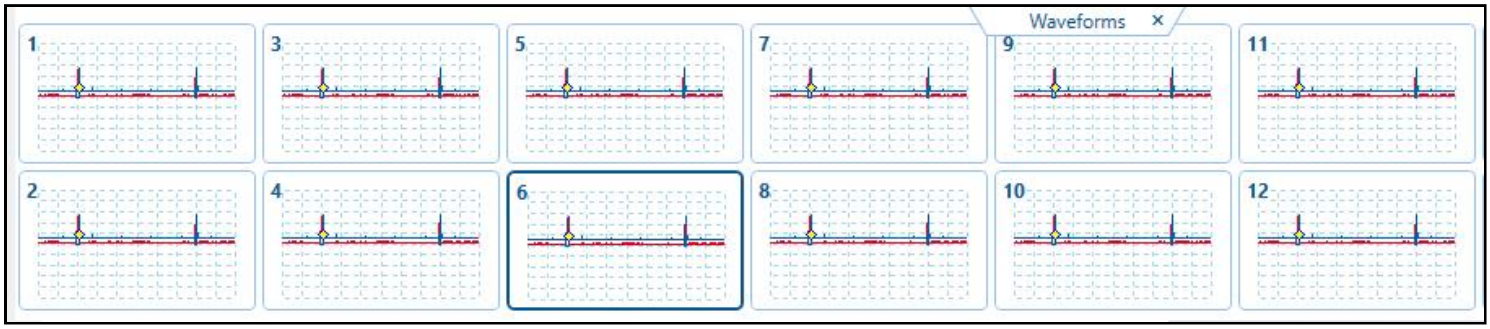
5. To begin operation move your cursor and tap on **RUNNING**..

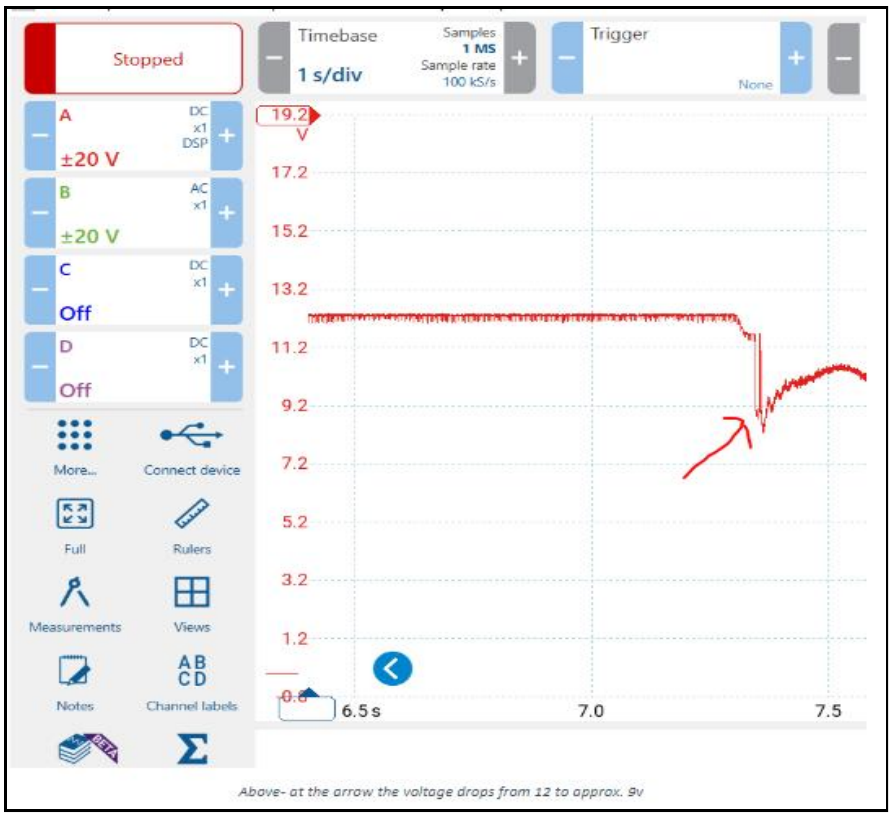
6. Reproduce the concern by road-testing or wiggle testing a wiring harness. After the concern has been identified move your cursor and tap on **STOPPED.**

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

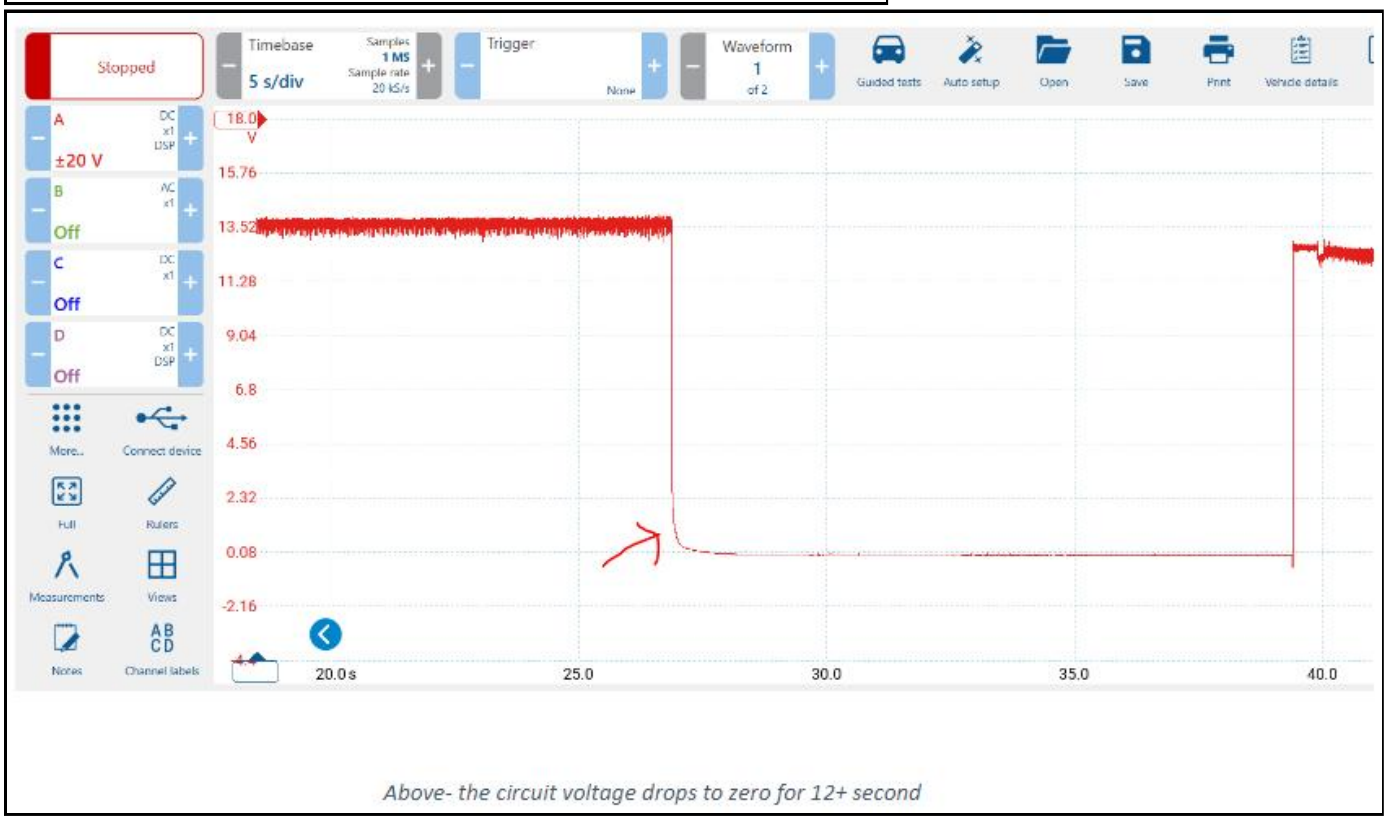
DATA ANALYSIS

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





Above- at the arrow the voltage drops from 12 to approx. 9v



Above- the circuit voltage drops to zero for 12+ second

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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