



DIXSON

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# Product Information Note 072-40289

Subject: <b>Troubleshooting Guide for 2-Inch Electrical Temperature and Fuel Gauges</b>	Initial Release Date: 02/16/99	Revision Date: 11/09/99	Revision: B
	Product Group: Heavy Duty Instrumentation		

## 1. Required Materials and Tools

You will need an inexpensive volt-ohmmeter that can measure from 0 to 35 volts DC . You will also need a Resistance Decade Box such as:

- Borroughs Instrument Gauge Tester Model BT-7707A from Kent Moore Tool Division, Warren, MI (800) 328-6657
- RS-200 Resistance Substituter from IET Labs, Inc., Westbury, NY (800) 899-8438

## 2. Procedure

### 2.1 Gauge Does Not Work At All

1. Gain access to the terminals on the rear of the gauge. If the gauge plugs into a panel, remove the gauge from the panel. (Be sure to reinstall the gauge after testing.)
2. Switch the ignition on and measure the voltage between the ignition and ground connections on the rear of the gauge (or panel connectors).
3. If no voltage is measured, repair wiring or panel connections.
4. If voltage is measured, disconnect the signal wire from the gauge sender at the sender and observe the gauge. It should read minimum scale. Next, short the signal wire from the gauge to ground. The gauge should read full scale.
  - a. If the gauge responds as described, test the sender and replace it if necessary.
  - b. If the gauge *does not* respond, first use the ohmmeter to check the continuity of the signal wire from the sender to the gauge for an open connection. If the wire and connections are good, replace the gauge. Otherwise, repair the wiring.

### 2.2 Gauge Is Inaccurate

1. With the ignition off, disconnect the signal wire from the gauge sender at the sender.
2. Connect the test resistance specified in the Test Resistance table on page 2 between the signal wire and ground.
3. Switch the ignition on and observe the gauge.
  - a. If the gauge reads as specified in the table, replace the sender.
  - b. If the gauge *does not* read as specified in the table, replace the gauge.

## 3. For Additional Support

Troubleshooting assistance is available from our Service Department Monday through Thursday from 7 a.m. to 5:30 p.m. MT, and Friday from 7 a.m. to 3:30 p.m. MT, at (970) 244-1243 or (970) 244-1259. You may also leave a detailed message at [service@ametekdixson.com](mailto:service@ametekdixson.com).

<b>PART NUMBER</b>	<b>SCALEPLATE</b>	<b>TEST RESISTANCE</b>	<b>CORRECT READING (APPROXIMATE)</b>
Peterbilt	100–250° F (Water)	186 ohms 84 ohms	150° F 200° F
Peterbilt	100–300° F (Oil)	103 ohms 41 ohms	200° F 300° F
Kenworth K152-152	100–230° F (Water)	170.3 ohms 73.5 ohms	155° F 210° F
Kenworth	100–300° F (Oil)	177.5 ohms 62.4 ohms	150° F 250° F
Kenworth K152-334	140—360° F	239 ohms 66 ohms	250° F 330° F
Kenworth K152-366	140–360° F	515 ohms 105 ohms	200° F 300° F
Kenworth	60–180° C	250.4 ohms 66.8 ohms	120° C 165° C
Kenworth	40–150° C	161.5 ohms 63.8 ohms	70° C 120° C
Kenworth	40–110° C	161 ohms 80 ohms	70° C 95° C
Freightliner	100–350°	177 ohms 41 ohms	150° F 300° F
Freightliner	100–300°	110 ohms 66 ohms	200° F 250° F
Freightliner	100–260°	227 ohms 87 ohms	140° F 200° F
Freightliner	100–250°	195 ohms 86 ohms	150° F 200° F
Freightliner (Fuel)	E–F	240 ohms 33 ohms	Empty Full

**Test Resistance Table**