

1971 Corvette: Service News: Fuel Gauge Diagnosis

Subject: Fuel Gauge Diagnosis

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Indications are that some service technicians are having difficulty diagnosing fuel gauge problems. When a fuel gauge does not operate properly, three areas must be tested separately; the tank unit, the dash unit, and the wiring between them.

The following simplified diagnostic procedure will assist technicians in checking out apparent malfunctions of this circuit.

1. Check the fuel gauge fuse in the fuse panel and all connections and inspect the wiring for damaged insulators or conductors.
2. Obtain a known good tank unit of the arm and float type from parts stock for use as a test unit. (The enclosed-canister type of tank unit is not convenient for testing purposes).
NOTE: Prior to the 1967 models, maximum resistance of the tank unit was 29 to 32 ohms. Tank unit resistance on later models is approximately 90 ohms.
3. Connect the test unit to the tank unit feed wire and the body harness connector located in the trunk on all passenger cars except Corvette. On Corvettes the connector is located above the spare tire. Ground the other terminal of the test unit.
4. With the ignition switch "on", slowly move the test unit float arm from the empty to full positions and observe the operation of the dash unit.
 - ˘ If the dash unit follows the test unit uniformly, then the tank unit is defective and should be replaced.
 - ˘ If the dash unit does not operate or operates erratically, then the problem lies in either the dash unit or the wiring between the body harness connector and the dash unit.
 - ˘ To check the dash unit, use a long set of leads and connect the test unit directly to the dash unit and to ground. Operate the tester again with the ignition "on".
 - If the dash unit does not operate correctly, then it is defective and should be replaced.
 - If the dash unit operates correctly, the problem lies in the wiring harness between the tank unit and the dash unit.
5. If the problem lies in the wiring harness it will consist of either a short or a break in a wire.
 - An **open** or **broken**, circuit will be indicated by a constant **full** reading.
 - A **short** circuit will be indicated by a constant **empty** reading.

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