

Title (en)  
FUEL COMPOSITION SENSING SYSTEMS AND METHODS USING EMF WAVE PROPAGATION

Title (de)  
KRAFTSTOFFZUSAMMENSETZUNGSERFASSUNGSSYSTEME UND -VERFAHREN UNTER VERWENDUNG VON EMK-  
WELLENAUSBREITUNG

Title (fr)  
SYSTÈMES DE DÉTECTION DE COMPOSITION DE CARBURANT ET PROCÉDÉS UTILISANT LA PROPAGATION D'ONDES EN FRÉQUENCES  
EM

Publication  
**EP 2122142 A1 20091125 (EN)**

Application  
**EP 07863138 A 20071218**

Priority  
• US 2007025979 W 20071218  
• US 87543906 P 20061218  
• US 80096507 A 20070508

Abstract (en)  
[origin: WO2008076453A1] A flex fuel sensor is deployed in conjunction with the fuel transfer line (e.g. around a plastic fuel line) or at the bottom/ side of a fuel tank. An RF signal of a constant frequency may be generated across a resonant circuit, which comprises of an inductor and a PCB trace capacitor, capacitor plates, semi cylindrical capacitor plates, or the like. Electromagnetic radiation is propagated into the passing fuel in the transfer pipe. The conductivity and dielectric properties of the fuel change the capacitance of the trace capacitor/capacitor plates. These changes are proportional to ethanol/alcohol content of the fuel and are preferably detected by a microcontroller, or the like, and then transmitted to a flex fuel vehicle Engine Management System.

IPC 8 full level  
**F02D 19/08** (2006.01); **G01N 27/22** (2006.01); **G01N 33/28** (2006.01)

CPC (source: EP KR)  
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Citation (search report)  
See references of WO 2008076453A1

Citation (examination)  
WO 2006122173 A2 20061116 - SCHRADER BRIDGEPORT INT INC [US], et al

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