

[54] DOUBLE AIR-FUEL RATIO SENSOR SYSTEM HAVING IMPROVED RESPONSE CHARACTERISTICS

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[58] Field of Search 123/440, 489, 589, 491; 60/276, 285, 274; 364/431.05

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[57] ABSTRACT

In a double air-fuel sensor system including two air-fuel ratio sensors upstream and downstream of a catalyst converter provided in an exhaust gas passage, an actual air-fuel ratio is adjusted in accordance with the outputs of the upstream-side air-fuel ratio sensor and the downstream-side air-fuel ratio sensor. The adjustment of the actual air-fuel ratio by the downstream-side air-fuel ratio sensor is prohibited in accordance with a coolant temperature of the engine.

38 Claims, 62 Drawing Figures

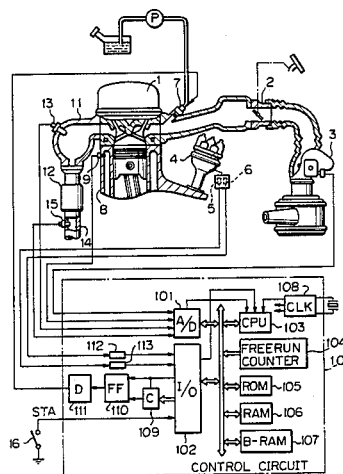


Fig. 1

□, ○ : SINGLE O₂ SENSOR SYSTEM
(WORST CASE)
■, ● : DOUBLE O₂ SENSOR SYSTEM

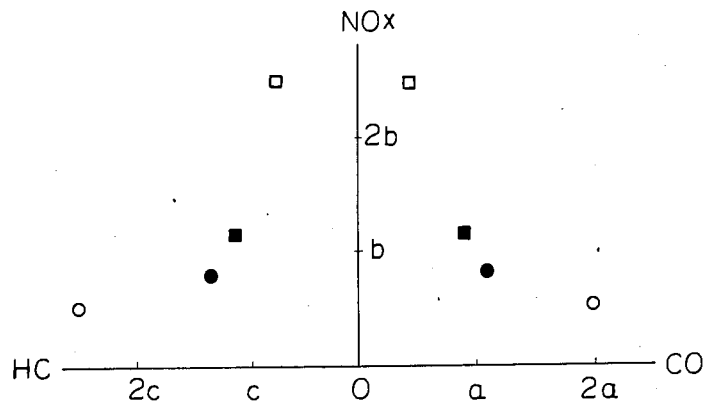


Fig. 2

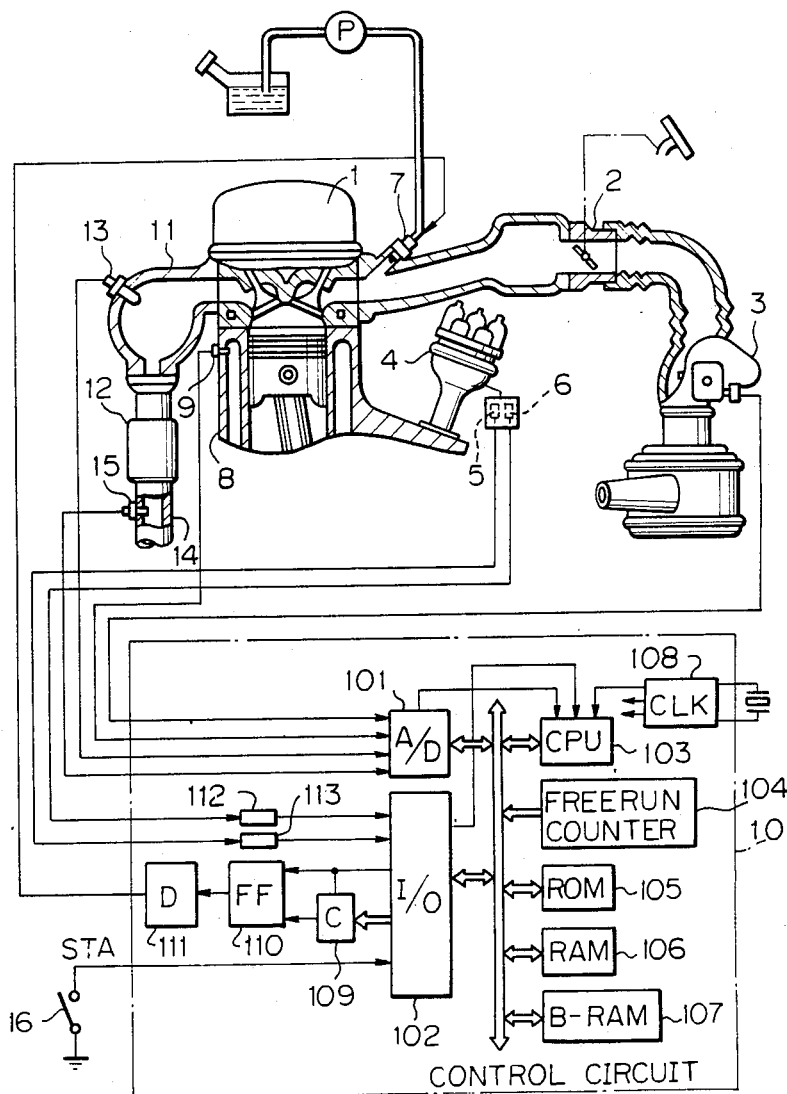


Fig. 3 A

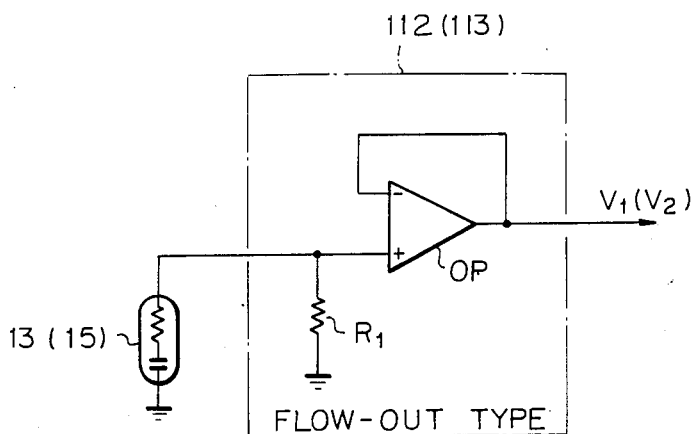


Fig. 3 B

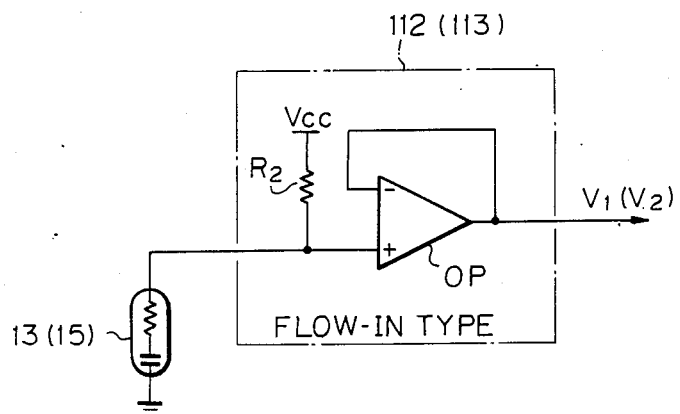


Fig. 4A

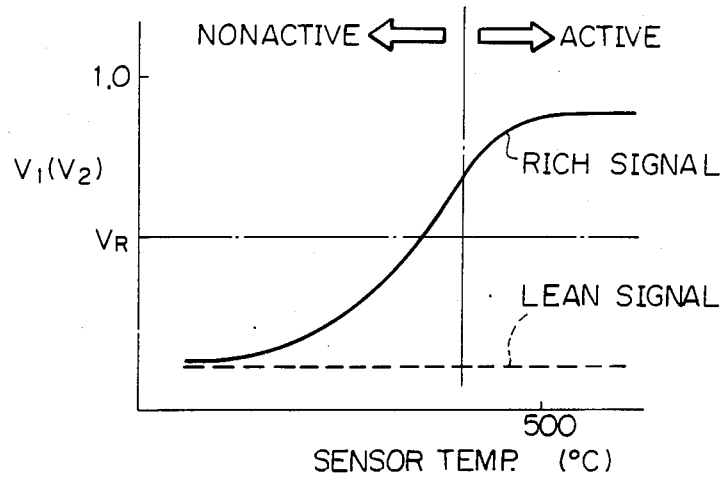
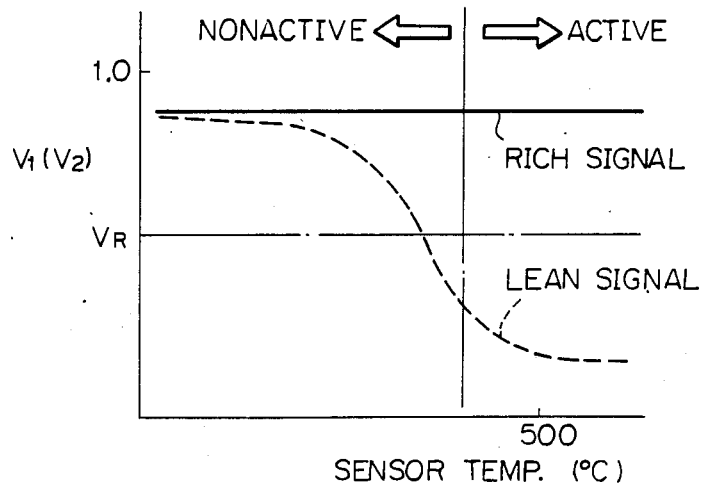


Fig. 4B



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