US009410509B2

(12) **United States Patent**
Roth et al.

(10) **Patent No.: US 9,410,509 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **ADAPTIVE INDIVIDUAL-CYLINDER THERMAL STATE CONTROL USING INTAKE AIR HEATING FOR A GDCI ENGINE**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 292 days.

(21) Appl. No.: **14/096,109**

(22) Filed: **Dec. 4, 2013**

(65) **Prior Publication Data**

US 2015/0152817 A1 Jun. 4, 2015

(51) **Int. Cl.**

F02M 31/04	(2006.01)
F02D 35/02	(2006.01)
F02B 29/04	(2006.01)
F02B 37/04	(2006.01)
F02B 39/04	(2006.01)
F02D 41/02	(2006.01)

(52) **U.S. Cl.**

CPC ***F02M 31/042*** (2013.01); ***F02D 35/02*** (2013.01); *F02B 29/0418* (2013.01); *F02B 29/0443* (2013.01); *F02B 37/04* (2013.01); *F02B 39/04* (2013.01); *F02D 35/023* (2013.01); *F02D 35/025* (2013.01); *F02D 35/028* (2013.01); *F02D 41/024* (2013.01); *F02D 2200/025* (2013.01); *F02D 2200/0414* (2013.01); *Y02T 10/126* (2013.01)

(58) **Field of Classification Search**

CPC F02B 1/12; F02B 3/06; F02M 25/07; F02M 31/04; F02M 31/042; Y02T 10/126

USPC 123/41.1, 41.12, 41.14, 41.31, 123/41.35–41.38, 41.52, 298, 435, 434, 123/549–554, 688; 60/599; 701/106, 108

See application file for complete search history.

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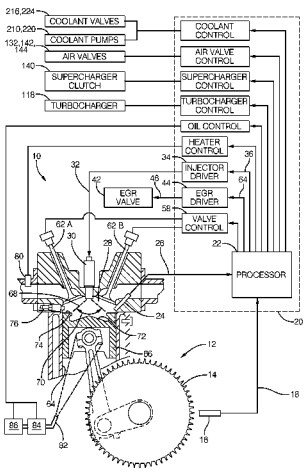
(57) **ABSTRACT**

A system for a multi-cylinder compression ignition engine includes a plurality of heaters, at least one heater per cylinder, with each heater configured to heat air introduced into a cylinder. Independent control of the heaters is provided on a cylinder-by-cylinder basis. A combustion parameter is determined for combustion in each cylinder of the engine, and control of the heater for that cylinder is based on the value of the combustion parameter for combustion in that cylinder. A method for influencing combustion in a multi-cylinder compression ignition engine, including determining a combustion parameter for combustion taking place in a cylinder of the engine and controlling a heater configured to heat air introduced into that cylinder, is also provided.

20 Claims, 5 Drawing Sheets