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United States Patent [19]

Asano et al.

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[54] **SYSTEM AND METHOD OF LOAD SHARING CONTROL FOR AUTOMOBILE**

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[21] Appl. No.: **480,284**

[22] Filed: **Feb. 15, 1990**

[30] **Foreign Application Priority Data**

Feb. 15, 1989 [JP] Japan 1-33595

[51] **Int. Cl.**[5] **G06F 13/00**

[52] **U.S. Cl.** **364/424.03**; 364/424.01; 73/117.3

[58] **Field of Search** 364/431.01, 424.03, 364/551.01, 424.04, 138; 340/870.16, 870.03; 73/117.2, 117.3

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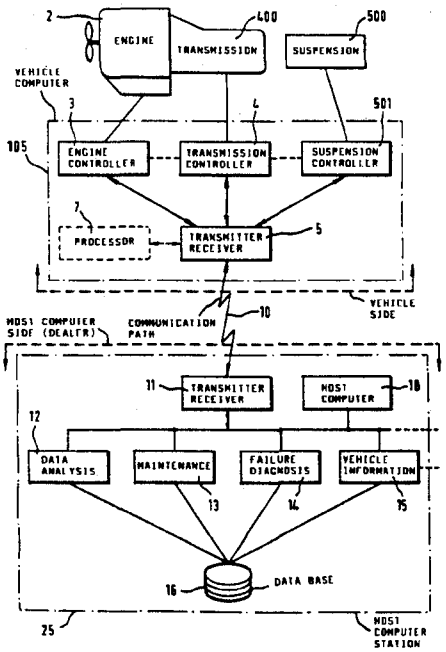
Primary Examiner—Thomas G. Black

[57] **ABSTRACT**

A system and method for load sharing processing operations between a vehicle mounted station (**105**) and a stationary base station (**25**) having a large capacity host computer is described. The vehicle mounted station has detectors for determining operating conditions of a vehicle and controllers (**3, 4, 501**) for varying the operating conditions. The controllers are connected to a transmitter-receiver (**5**) which is arranged to communicate over a path (**10**) with a transmitter-receiver (**11**) of the base station. The base station has a host computer (**18**) having a large memory capacity. At predetermined intervals, for example, distance of travel or at engine stop, the vehicle transmitter (**5**) transmits operating conditions to the base receiver (**11**) for data processing and the base transmitter (**11**) then transmits processed data back to the vehicle receiver (**5**), whereupon the controllers (**3, 4, 501**) modify the vehicle operating conditions. The vehicle operating conditions may be an indication of life expectancy of fuel injectors or sensors, updating data processing maps. The presence of abnormal operating conditions may be detected by the vehicle mounted station, evaluated by the base station and an emergency warning indication provided back to the vehicle mounted station, or if the abnormal condition is not of an emergency nature then counter measures are transmitted from the base station to the vehicle mounted station.

20 Claims, 11 Drawing Sheets



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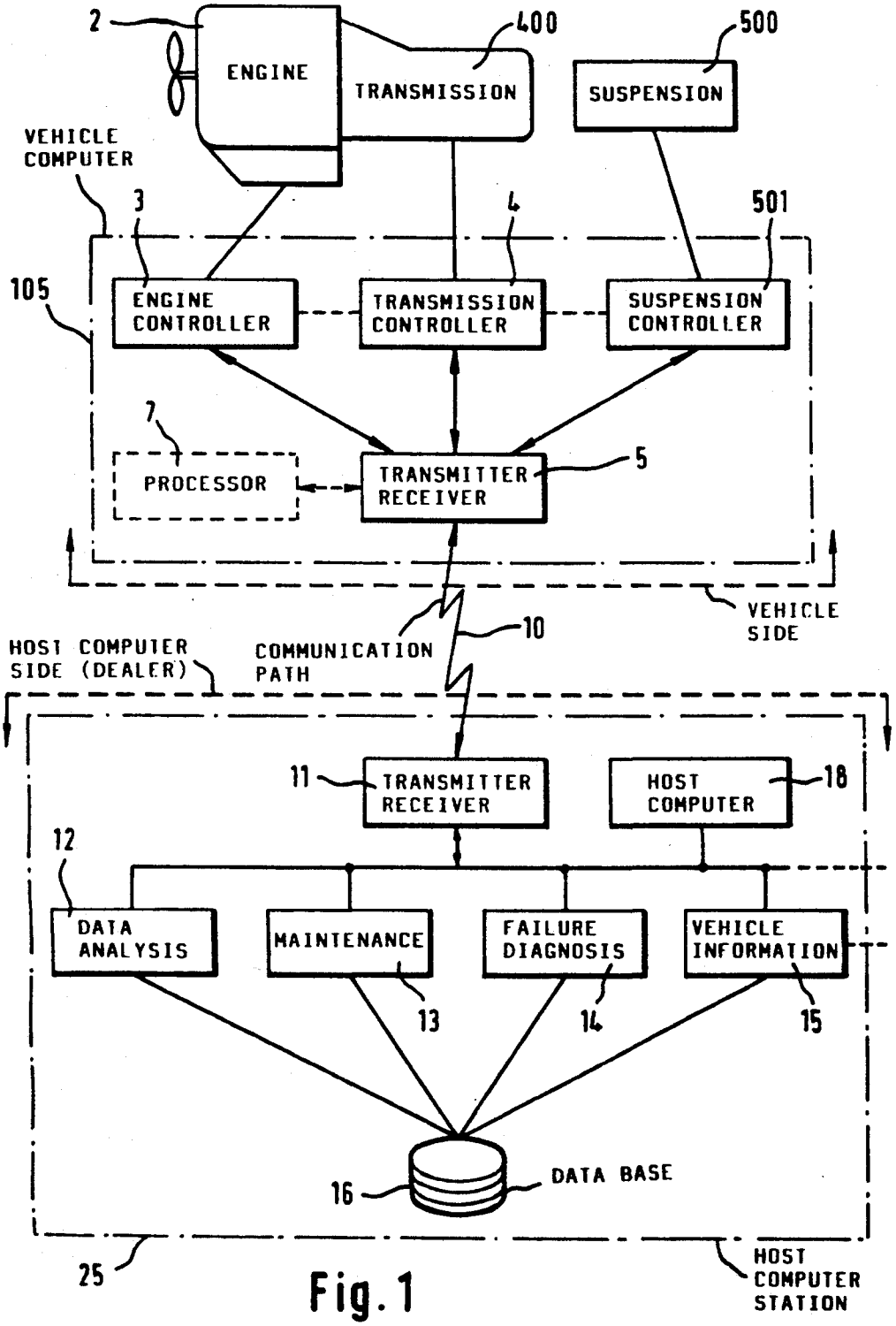

Fig. 1

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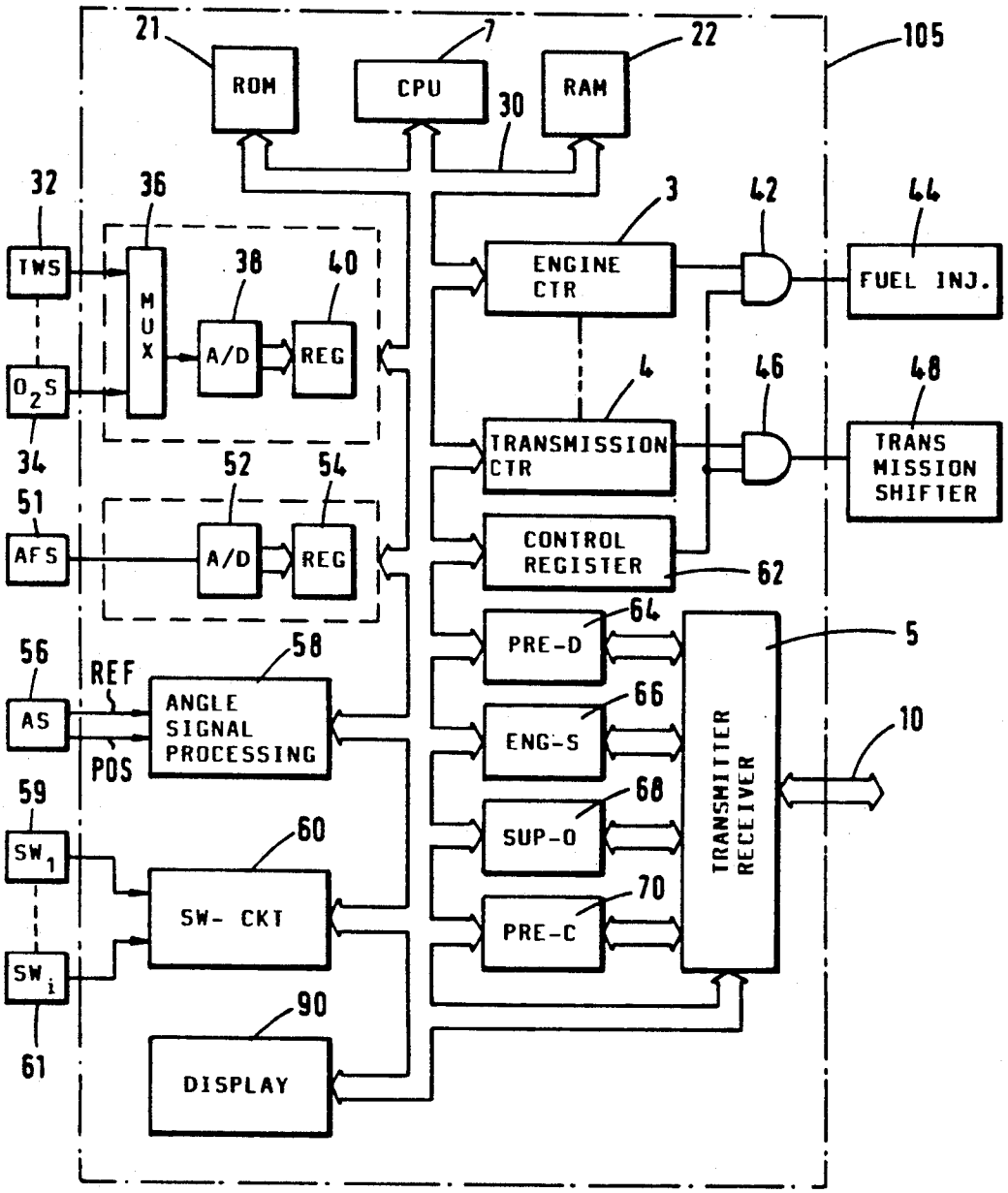

Fig. 2

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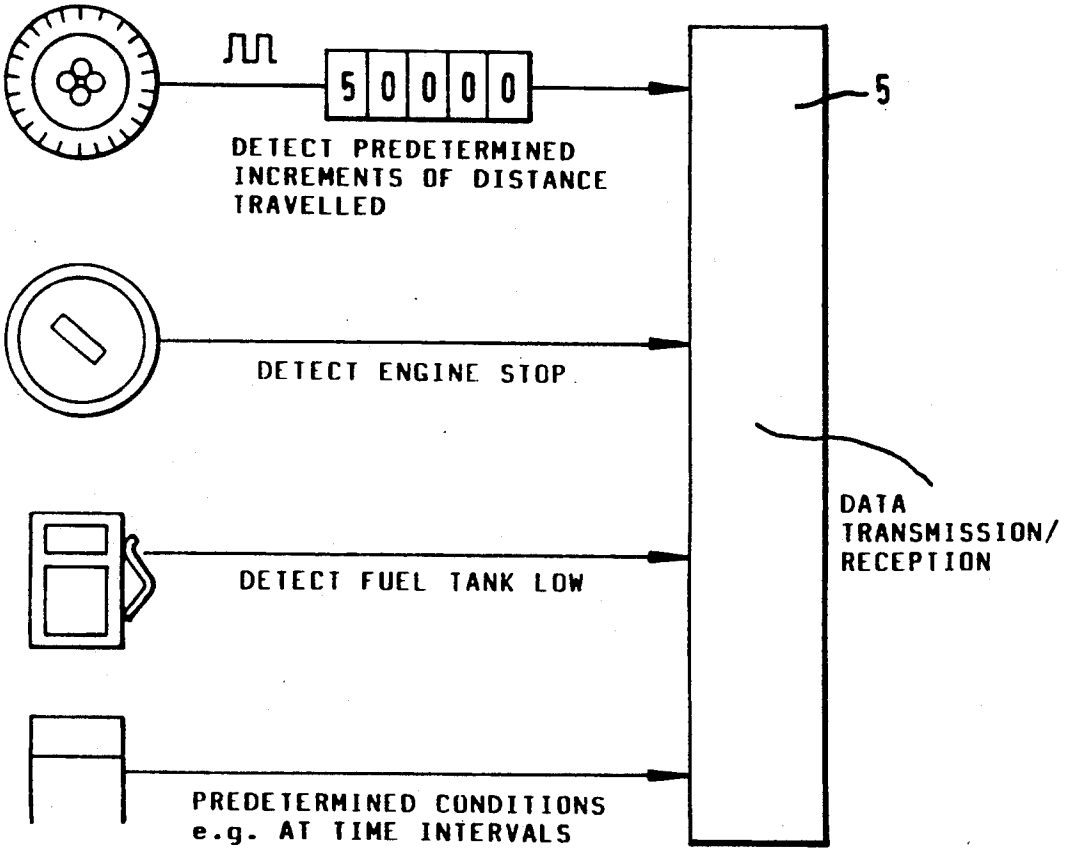

Fig.3

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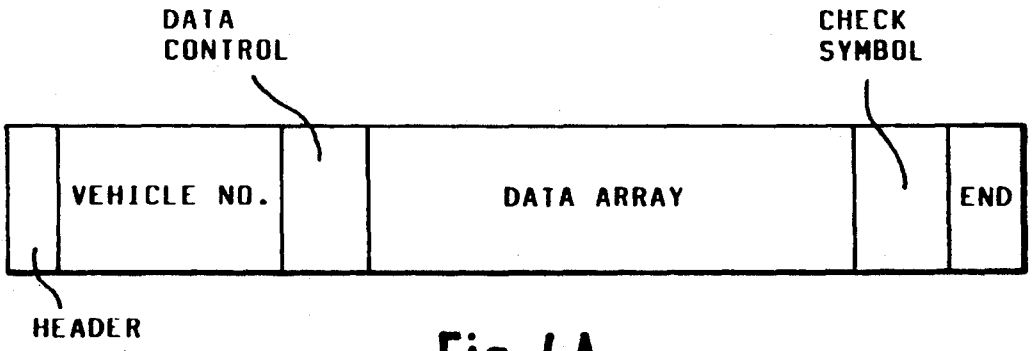

Fig.4A

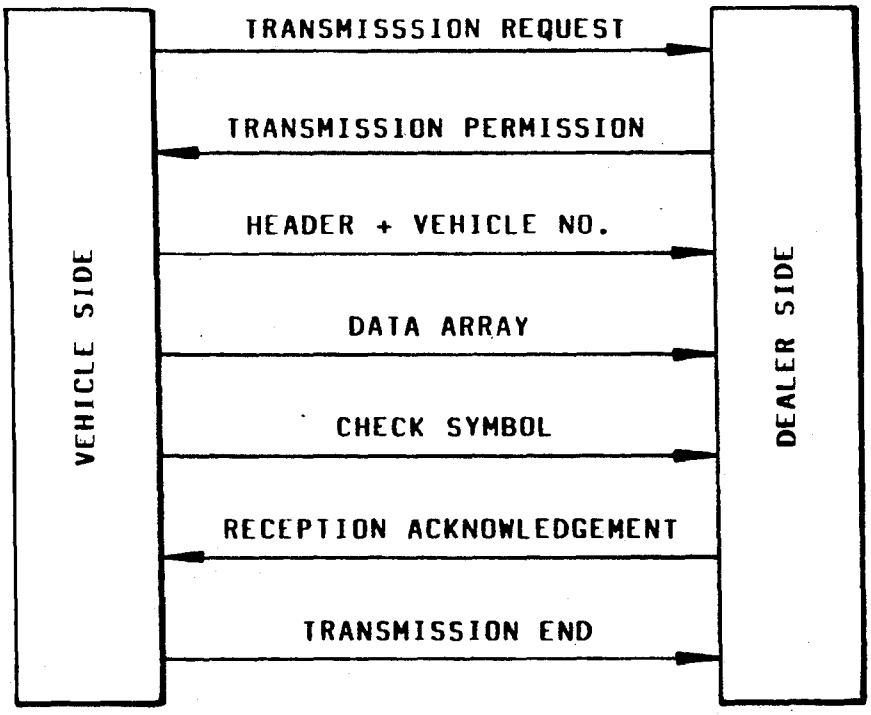

Fig.4B

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