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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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[Continued on next page]

(54) **Title**: CONTROL SYSTEM FOR EQUIPMENT ON A VEHICLE WITH A HYBRID-ELECTRIC POWERTRAIN

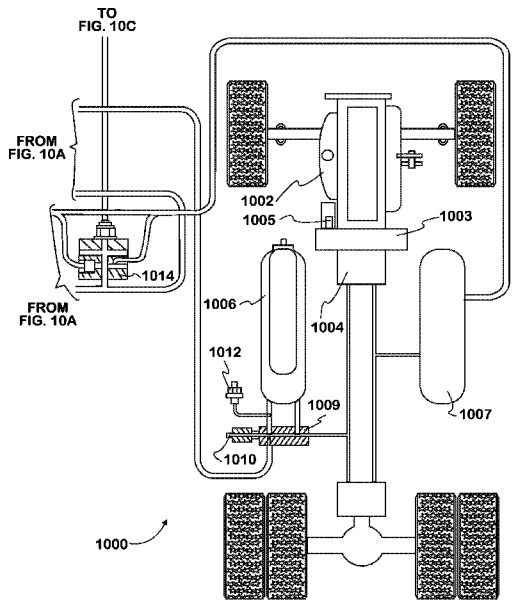

FIG. 10B

(57) **Abstract**: A vehicle (1) having a hydraulic hybrid powertrain (1000) comprises a power take off unit (22), a hydraulic pump (1004), a hydraulic accumulator (1006), an accumulator isolation valve (1009), an accumulator solenoid (1010), and a vehicle hydraulic component. The hydraulic pump (1004) mechanically connects to the power take off unit and is driven by the power take off unit. The hydraulic accumulator (1006) is disposed in fluid communication with the hydraulic pump (1004) and receives and stores pressurized hydraulic fluid from the hydraulic pump. The accumulator isolation valve (1009) has a first position and second position. The accumulator isolation valve (1009) is disposed in fluid communication with the hydraulic accumulator (1006). The accumulator solenoid (1010) connects to the accumulator isolation valve (1009) and positions the accumulator isolation valve (1009) to the first position and the second position. The vehicle hydraulic component is disposed in fluid communication with the accumulator isolation valve (1009) and the hydraulic accumulator (1006).

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— *with amended claims (Art. 19(1))*

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1. A control system for a vehicle having a hydraulic hybrid powertrain comprising:

a vehicle hydraulic component signal generation device;

a datalink module disposed in electrical communication with the vehicle hydraulic component signal generation device;

an electronic system controller disposed in electrical communication with the datalink module;

an electronic control module disposed in electrical communication with the electronic system; and

a vehicle hydraulic component transducer disposed in electrical communication with the electronic system controller;

the control system for a vehicle having a hydraulic hybrid powertrain being characterized by further comprising

an accumulator isolation valve having a first position and a second position, wherein the accumulator isolation valve is moveable between the first position and the second position based upon output of the vehicle hydraulic component transducer.

2. The control system for a vehicle having a hydraulic hybrid powertrain of claim 1 further comprising an accumulator transducer disposed in electrical communication with the electronic control module.

3. The control system for a vehicle having a hydraulic hybrid powertrain of claim 1 further comprising a display disposed in electrical communication with the electronic control module and the electronic system controller.

4. A method of operating a vehicle having a hydraulic hybrid powertrain comprising:

generating an output signal from a vehicle hydraulic component transducer;

transmitting the output signal from the vehicle hydraulic component transducer to an electronic system controller;

energizing a remote power module in response to the output signal from the vehicle hydraulic component transducer user input switch;

opening an accumulator isolation valve in response to energizing the remote power module;

providing hydraulic fluid from a hydraulic accumulator to a vehicle hydraulic component in response to opening the accumulator isolation valve; and

monitoring an accumulator transducer output signal with an electronic control module;

the method of operating a vehicle having a hydraulic hybrid powertrain being characterized by further comprising

displaying an indication of the output signal of the vehicle hydraulic component output signal; and

displaying an indication of the output signal of the accumulator transducer.

5. The method of operating a vehicle having a hydraulic hybrid powertrain of claim 4 further comprising:

starting an internal combustion engine when the output signal of the accumulator transducer falls below a predetermined level;

running a hydraulic pump with the internal combustion engine;

recharging the hydraulic accumulator utilizing the hydraulic pump.

6. The method of operating a vehicle having a hydraulic hybrid powertrain of claim 4 further comprising:

de-energizing a remote power module in response to the output signal from the vehicle hydraulic component transducer user input switch;

closing an accumulator isolation valve in response to de-energizing the remote power module.