

Fire Research Corporation

Pressure Governor Diagnostics

This is intended to provide diagnostic assistance. Please have the product manual available prior to performing any diagnostics. Product manuals are available at fireresearch.com

• Does the display module come on?

Yes No

Go to page 3

• Is the voltage between the ignition wire and the display module ground wire above 12 VDC?

• Repair vehicle wiring!

No Yes

Contact FRC

Continued from Page 2

•Is the “Throttle Ready” LED on? (If Equipped)

Yes

Go to Page 4

Is the pump engaged?

No

No

Yes

Is there 12 VDC to the interlock wire at the governor?

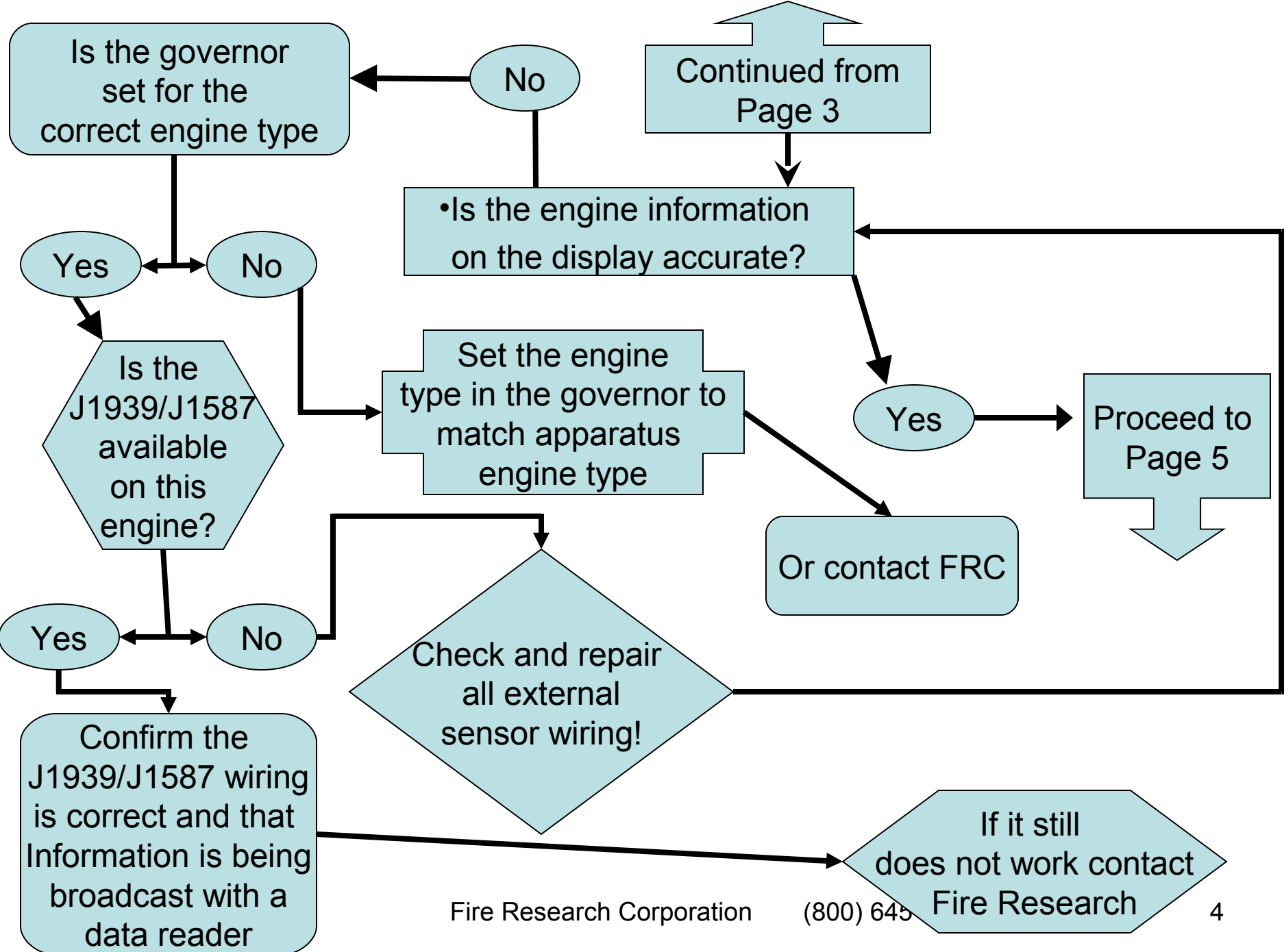
No

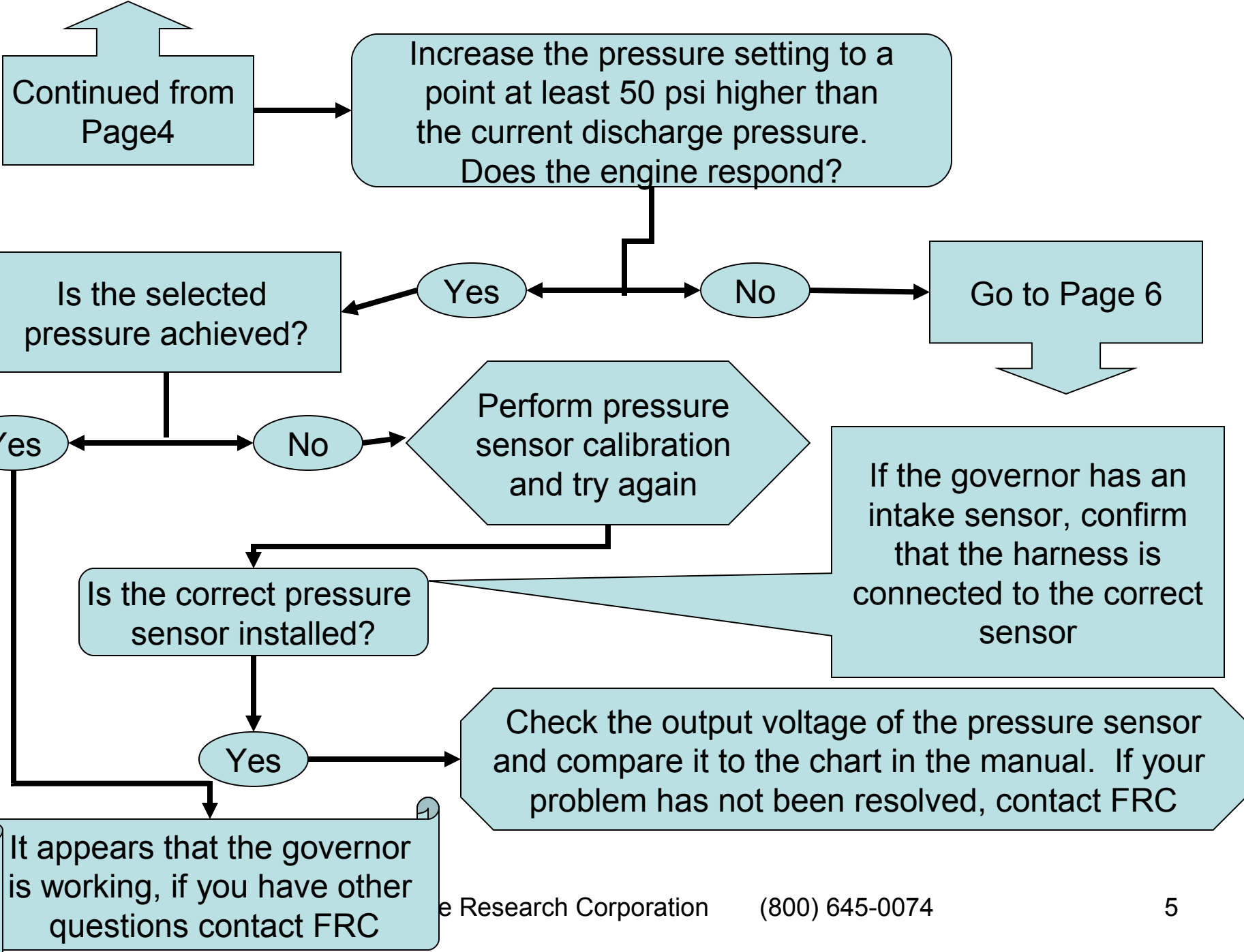
Yes

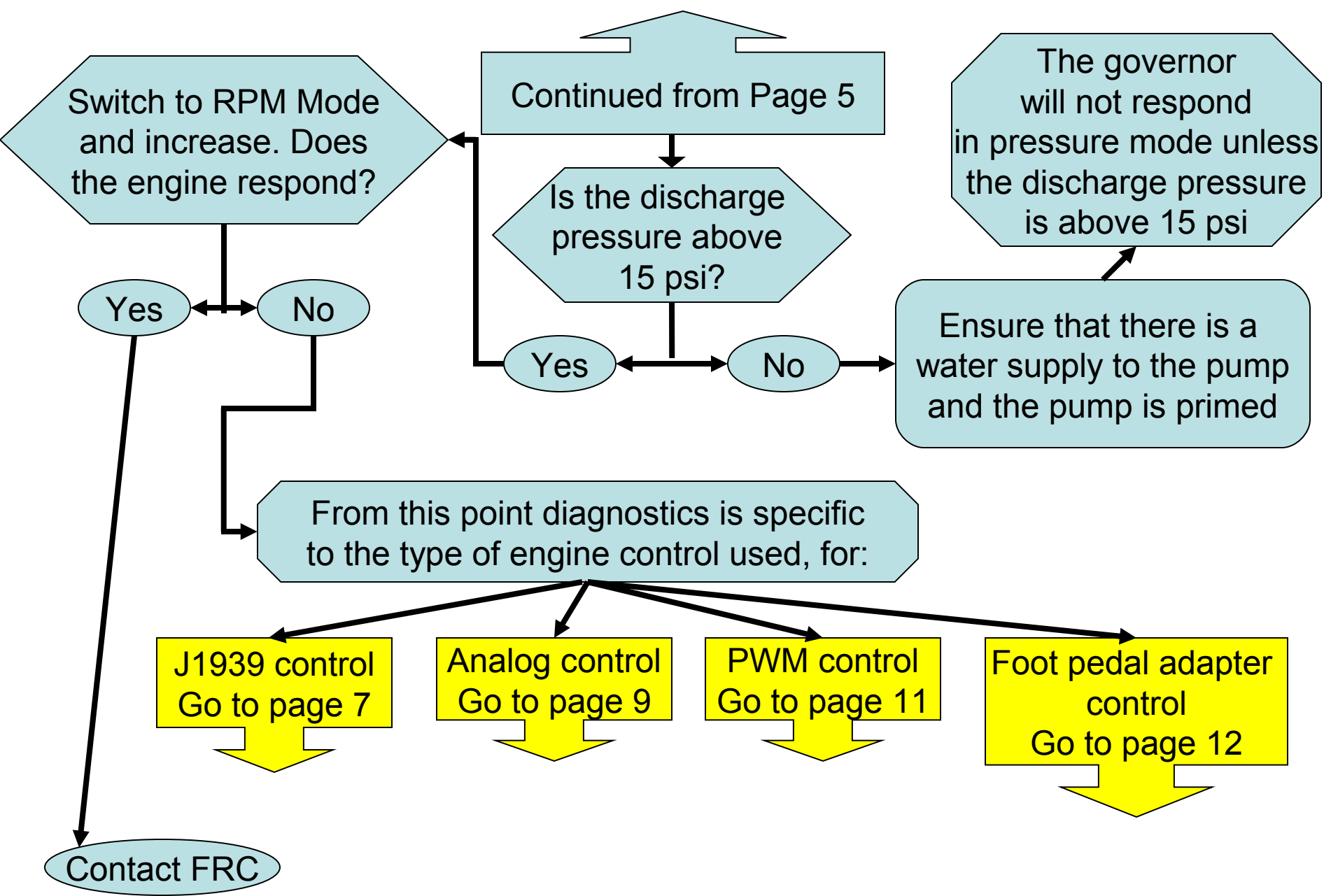
Engage the pump and test operation

Repair the vehicle interlock circuit

Contact FRC







Continued from
page 6 for J1939 control

Turn off ignition, measure the resistance on the J1939 wiring. there should be 60 OHMS resistance. To high or low may indicate an incorrect number of terminating resistors

Detroit Diesel

Cummins

Locate the engine type used on the apparatus

Navistar

Caterpillar

Continued on page 8

If engine ECM is properly programmed

Confirm that engine ECM has Fire Apparatus Software Package

Contact FRC

J1939 is not currently available

Caterpillar
continued from
page 7

ECM software with a Personality Module release date of May08 for C7, C9, C13, C15 engines, will have the remote throttle with J1939 Speed Command setting available

Using a digital volt meter connect the black lead to pin 3 and the red lead to pin 68 of the engine ECM 70 pin connector. You should have .75 VDC which is 15% duty cycle

Confirm that a ground signal is provided to pin 56 of the 70 pin connector

If all of the above signals are present and the engine does not respond contact FRC

Using a digital volt meter, confirm that there is 5 VDC between the red and black wires

Analog control continued from page 6

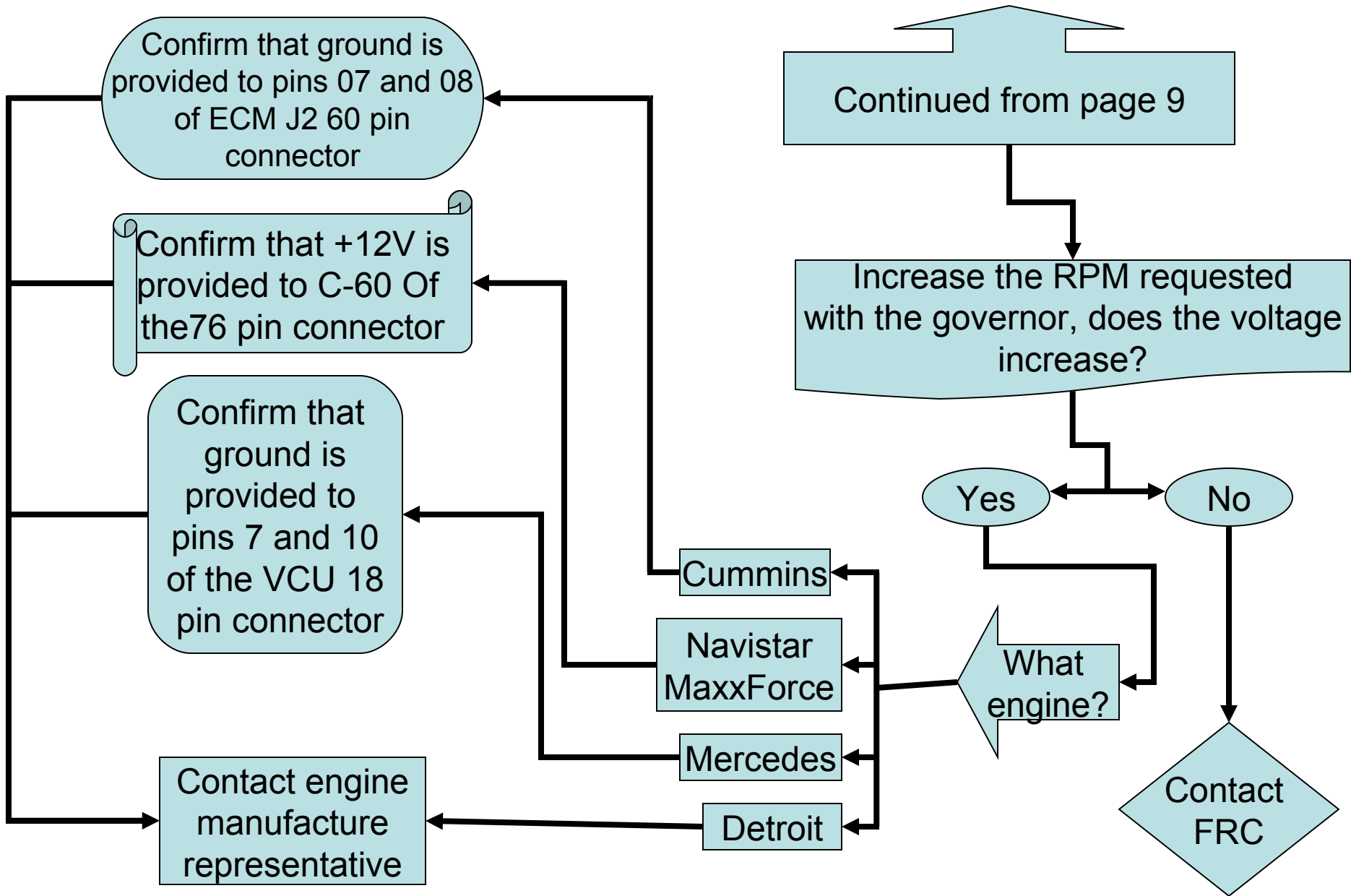
Refer to the manual for pin location for the engine and governor on the apparatus

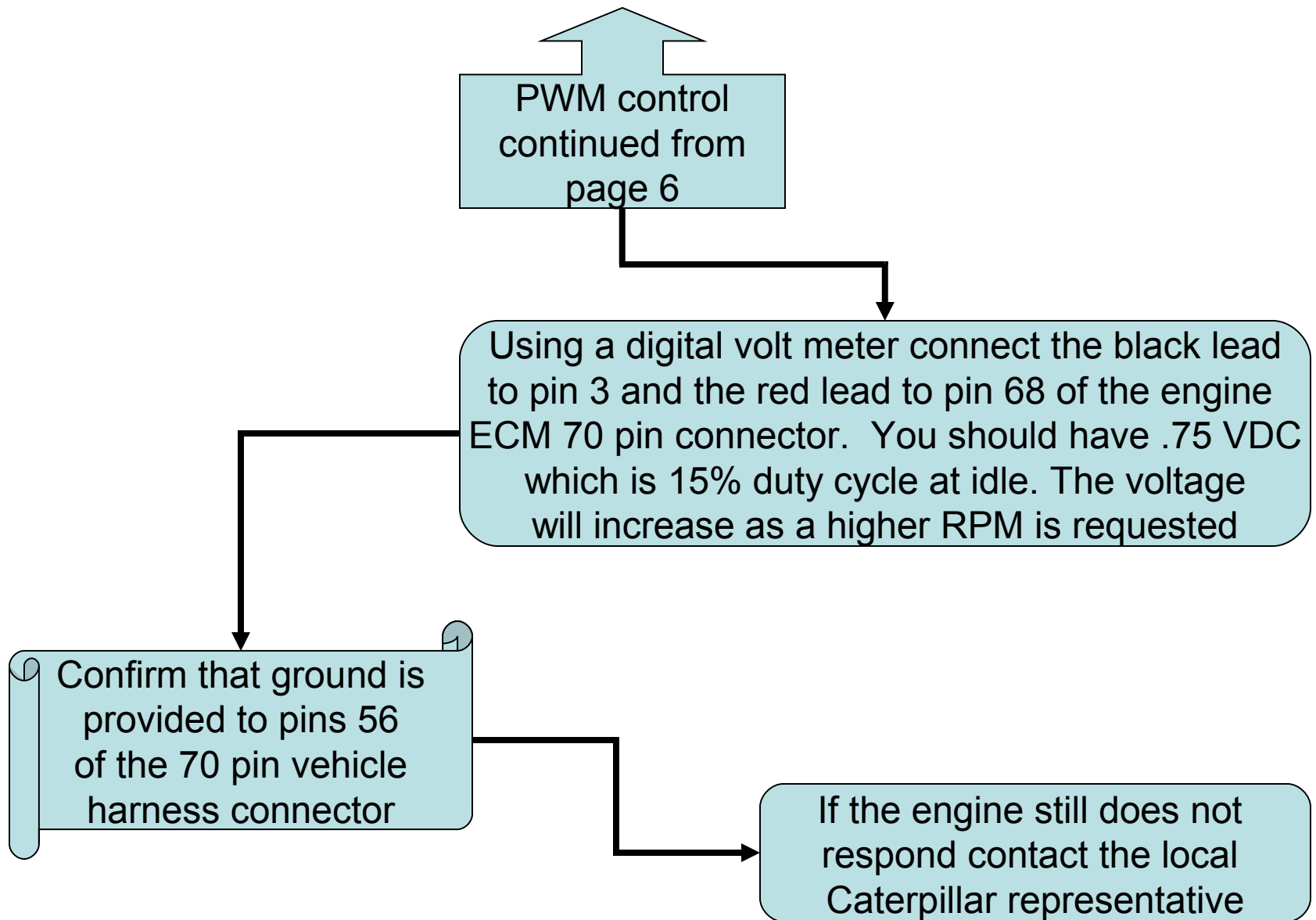
Leave the black lead of your meter on the black and connect the red lead to the white wire

Analog control systems consist of a 3 wire circuit. Red is 5VDC from the engine to the governor
Black is engine ECM ground to the governor
White is the analog signal from the governor to the engine

This configuration is measuring the analog control signal to the engine ECM. All though this varies from one engine type to another you should have about 0.5 VDC at idle

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Continued from
page 6
foot pedal adapter

Foot pedal adaptors are used on engine types that do not have a remote throttle input option

Disconnect the foot pedal adapter from the foot pedal wiring and reconnect the vehicle harness directly to the foot pedal. Does the engine RPM increase when the foot pedal is pressed ?

Yes
No

Reconnect the foot pedal adapter

Measure the analog signal at the 6 pin connector on the foot pedal adapter. Does it increase as a higher RPM is requested?

Yes
No

Contact chassis manufacturers representative

Pin 2 is 5vdc from foot pedal
Pin 3 is control signal to adapter
Pin 4 is ground from foot pedal

Contact FRC

Confirm there is 12vdc on pin 1 of this 6 pin connector