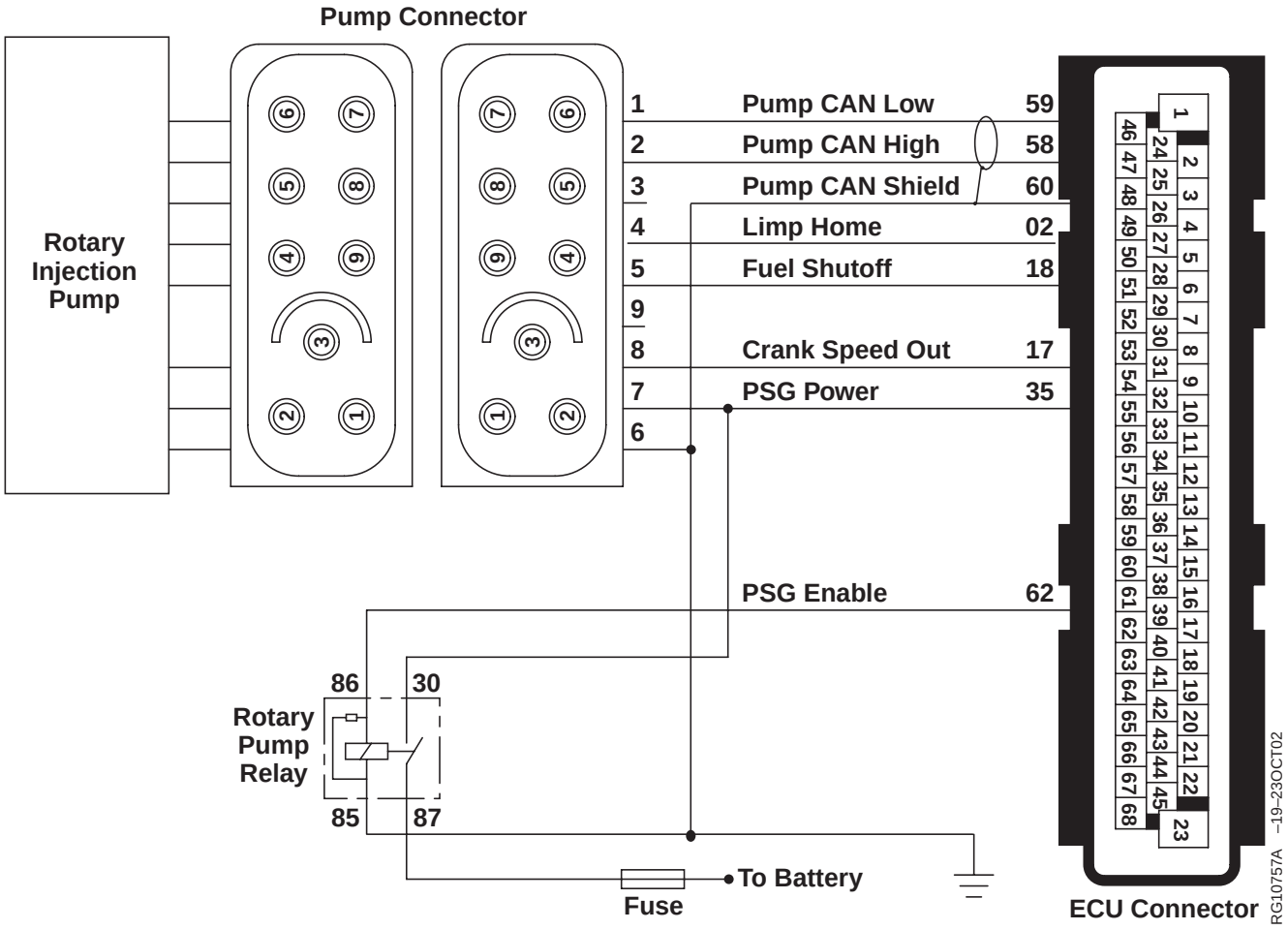
000629.19 — ECU to Pump Communication Error



NOTE: Wiring schematic shows OEM engine applications only. For wiring information on other applications, see APPLICATION SPECIFICATIONS in Section 06, Group 210 of this manual.

Bosch VP44 Rotary Injection Pump

- The Bosch VP44 rotary injection pump is controlled by a pump control unit that monitors information received from sensors inside the pump. It also acquires information from the ECU over a CAN bus and other dedicated wires between the ECU and pump. This helps the pump control unit to provide for the accurate quantity and timing of fuel delivery to the engine.

DTC 000629.19 will set if:

- The ECU does not receive CAN messages from the injection pump.

If DTC 000629.19 sets, the following will occur:

- If no other codes are present, the ECU will allow the pump to run at low throttle.
- If other codes are present, the ECU might shut down the engine.
- The ECU will set a BLINKING stop lamp.

RG41221,00001A0 –19–22OCT02–1/1

000629.19 — ECU to Pump Communication Error

The ECU does not receive CAN messages from the injection pump.

RG41221,00001A1 –19–22OCT02–1/1

000629.19 ECU to Pump Communication Error Diagnostic Procedure

NOTE: Other DTCs may be active with 000629.19. If 001485.02 is active also, follow that diagnostic chart first.

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,233

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❶ **Connection Check**	**IMPORTANT: Do not force probes into connector terminals or damage will result. Use JT07328 Connector Adapter Test Kit to make measurements in connectors. This will ensure that terminal damage does not occur.** *NOTE: For wiring and theory of operation information, see DTC 000629.19 ECU TO PUMP COMMUNICATION ERROR supporting information.* Before using this diagnostic procedure, perform a preliminary inspection of the ECU connector and the injection pump harness connector looking for dirty, damaged, or poorly positioned terminals.	**No faulty connection(s):** GO TO ❷ **Faulty connection(s):** Repair faulty connection(s).
❷ **Intermittent Fault Test**	*NOTE: For wiring and theory of operation information, see DTC 000629.19 ECU TO PUMP COMMUNICATION ERRORsupporting information.* 1. Connect the DST or SERVICE ADVISOR™. For instructions on connecting to the DST or SERVICE ADVISOR™, see CONNECTING TO DIAGNOSTIC SCAN TOOL (DST) OR SERVICE ADVISOR™earlier in this Group. 2. Ignition ON, engine OFF 3. Start the ECU diagnostic software 4. Make note of any DTCs, then clear all DTCs 5. Ignition ON, engine running or cranking for 15 seconds 6. Read DTCs using DST or SERVICE ADVISOR™.	**000629.19 reoccurs:** GO TO ❸ **000629.19 doesn't reoccur:** Problem is intermittent. If no other codes are present, see INTERMITTENT FAULT DIAGNOSTICS, earlier in this Group.

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❸ **Open in PSG Power Circuit Wire Test**	*NOTE: For wiring and theory of operation information, see DTC 000629.19 ECU TO PUMP COMMUNICATION ERROR supporting information.* 1. Ignition OFF 2. Disconnect injection pump connector 3. Ignition ON, engine OFF 4. Using a multimeter, measure voltage between terminal 7 in the injection pump connector on the engine harness and a good chassis ground	**Approximately battery voltage:** GO TO ❹ **Substantially less than battery voltage:** Open in PSG power circuit – – –1/1

❹ **Pump Communication Wiring Check**	*NOTE: For wiring and theory of operation information, see DTC 000629.19 ECU TO PUMP COMMUNICATION ERROR supporting information.* 1. Ignition OFF 2. Disconnect ECU connector 3. Using a multimeter, measure resistance between: • Terminal 1 in the injection pump connector and terminal 59 in the ECU connector on the engine harness • Terminal 2 in the injection pump connector and terminal 58 in the ECU connector on the engine harness	**Both measurements 5 ohms or less:** GO TO ❺ **Either measurement greater than 5 ohms:** Faulty CAN wiring between injection pump and the ECU – – –1/1

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,234

❺ **Pump CAN Low Wire Check for Short**	*NOTE: For wiring and theory of operation information, see DTC 000629.19 ECU TO PUMP COMMUNICATION ERROR supporting information.* 1. Ignition OFF 2. Keep ECU and pump connectors disconnected 3. Using a multimeter, measure resistance between terminal 59 in the ECU connector and: • A good ground • All other terminals in the ECU connector	**All measurements greater than 20k ohms:** GO TO ❻ **Either measurement less than 20k ohms:** Pump CAN Low wire shorted to ground or another wire in harness – – –1/1

❻ **Pump CAN High Wire Check for Short**	*NOTE: For wiring and theory of operation information, see DTC 000629.19 ECU TO PUMP COMMUNICATION ERROR supporting information.* 1. Ignition OFF 2. Keep ECU and pump connectors disconnected 3. Using a multimeter, measure resistance between terminal 58 in the ECU connector and: • A good ground • All other terminals in the ECU connector	**All measurements greater than 20k ohms:** Faulty injection pump connector OR Faulty injection pump **Either measurement less than 20k ohms:** Pump CAN High wire shorted to ground or another wire in harness – – –1/1