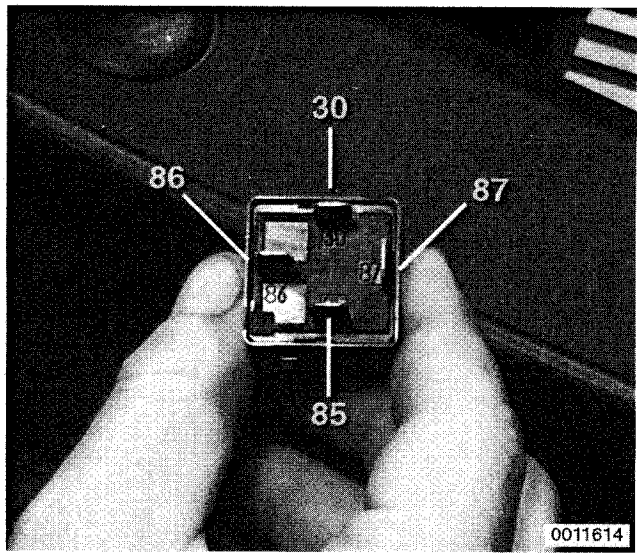

Fig. 9. Fuel pump relay terminal identification.

Fuel Pump Electrical Tests

Troubleshooting of any fuel pump fault should begin with checking the fuel pump fuse and the fuel pump relay. The DME main relay should also be checked.

NOTE —
Special tools are required for some of the tests described here.

Fuel pump electrical circuit, testing

The fuel pump electrical circuit diagram is shown in Fig. 10.

CAUTION —
Fuse and relay locations may vary. Use care when troubleshooting the electrical system at the fuse/relay panel. To resolve problems in identifying a relay, see an authorized BMW dealer.

1. Remove rear seat cushion, pull right side insulation mat back to expose fuel tank access cover. Remove cover to expose wiring connections.

2. Remove fuel pump relay and operate fuel pump as described under **Operating fuel pump for tests** earlier. Pump should run. Disconnect jumper wire when finished.

3. If fuel pump does not run, disconnect black harness connector from tank sender unit. With jumper wire connected as described in step 2 above, check for positive (+) battery voltage at harness connector terminals. See Fig. 11.

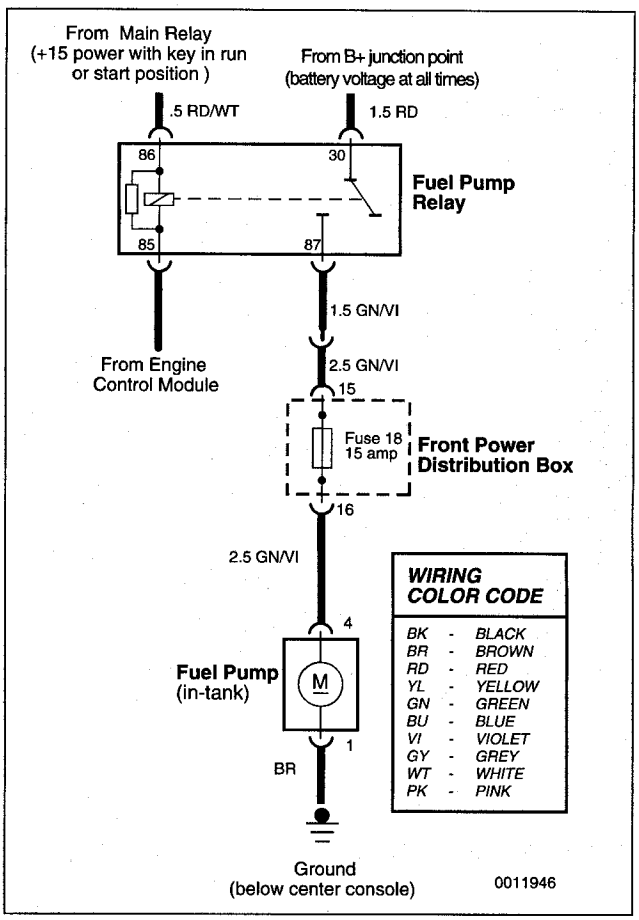

Fig. 10. Fuel pump electrical circuit.

4. If voltage and ground are present, fuel pump is probably faulty. If there is no voltage, check wiring from fuel pump relay and make sure relay is functioning correctly.

Fuel pump power consumption, testing

NOTE —
- *To achieve accurate test results, the battery voltage at the connector should be approximately 13 volts. Charge the battery as necessary.*
- *A higher than normal power consumption usually indicates a worn fuel pump, which may cause intermittent fuel starvation due to pump overheating and seizure. The only remedy is pump replacement. Be sure to check that the return line and the pump pickup are not obstructed before replacing the pump.*

1. Remove rear seat cushion, pull right side insulation mat back to expose fuel tank access cover. Remove cover to expose wiring connections.

2. Disconnect (black) harness connector from fuel pump.

3. Connect an ammeter and an insulated jumper wire between terminals in connector and corresponding pump terminals. See Fig. 12.