

STEERING SYSTEM - ELECTRONIC POWER STEERING

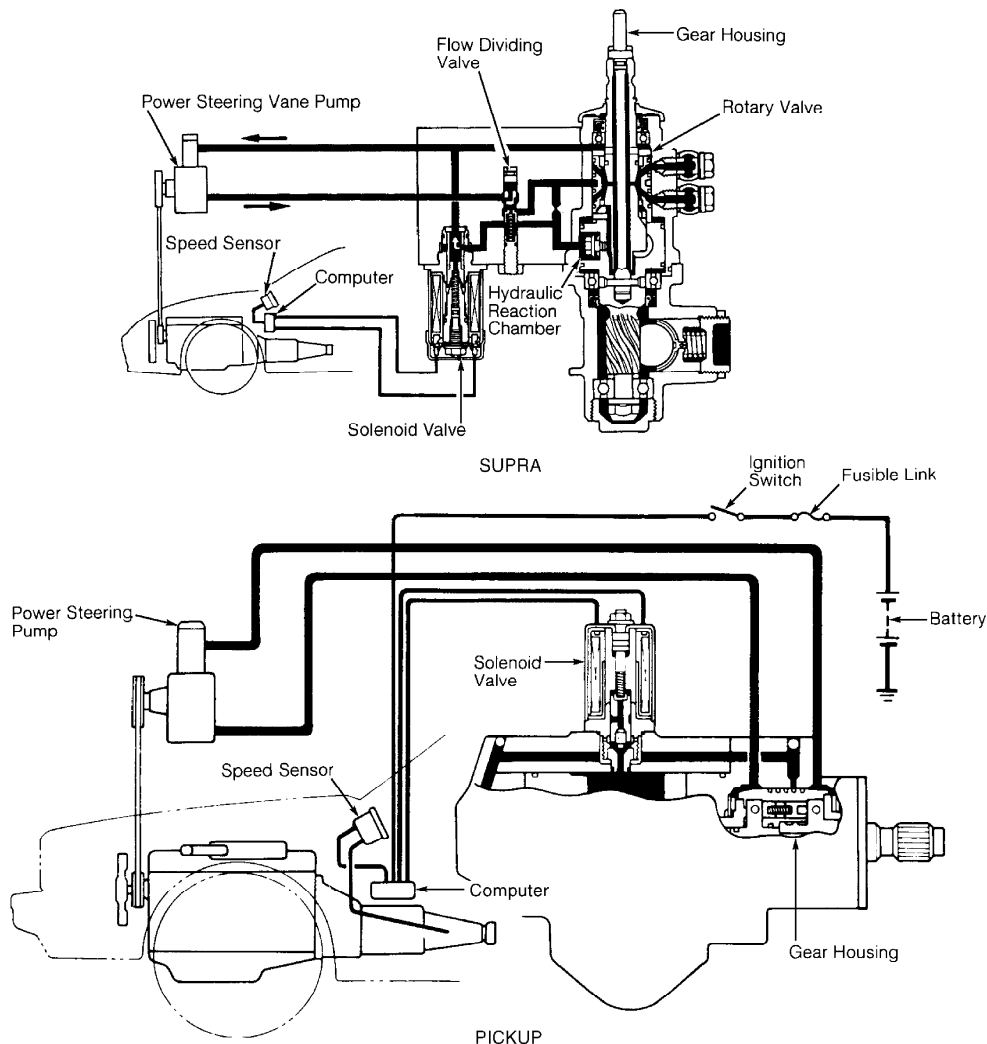
1996 Toyota Supra

1995-96 STEERING
Toyota - Electronic Power Steering
Supra

DESCRIPTION

Electronically controlled power steering system consists of speed sensor (driven off speedometer), computer, solenoid valve and other conventional power steering components. See Fig. 1.

Computer-controlled solenoid valve reduces hydraulic pressure to steering gear at high speeds to increase steering effort. With vehicle at low speeds or stationary, solenoid valve increases hydraulic pressure to steering gear to reduce steering effort.



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Fig. 1: Identifying Electronically Controlled Power Steering System Components
Courtesy of Toyota Motor Sales, U.S.A., Inc.

TROUBLE SHOOTING

A malfunction in electronically controlled power steering system will usually cause sensitive steering during high-speed driving and hard steering during idle or low-speed driving. However, these problems do not necessarily indicate a malfunction in electronically controlled power steering system. Always check following before testing electronically controlled power steering system.

- * Tire Pressure
- * Suspension & Steering Linkage Lubrication
- * Front Wheel Alignment
- * Steering System & Suspension Ball Joints
- * Bent Steering Column
- * Power Steering System Leakage
- * Power Steering Pump Pressure

ADJUSTMENTS

There are no adjustments for this system.

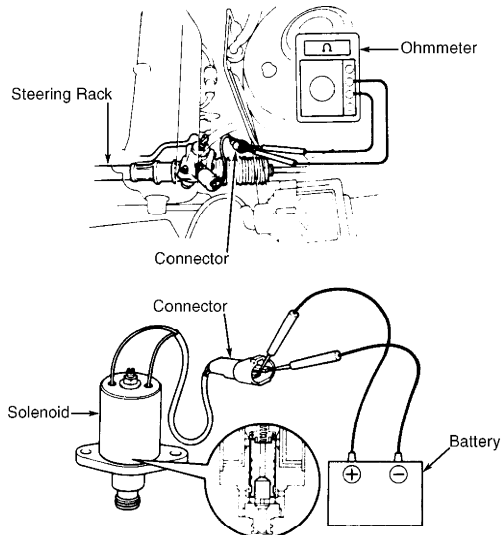
TESTING

COMPONENT TESTING

Solenoid Valve

1) Disconnect solenoid valve connector. Using an ohmmeter, measure resistance between solenoid valve connector terminals. See Fig. 2. Resistance should be 6-11 ohms. If resistance is not as specified, replace solenoid valve.

2) Remove solenoid valve from steering gear housing. Using jumper wires, connect battery voltage and ground to solenoid valve connector terminals. See Fig. 2. Ensure solenoid valve clicks. If needle valve does not function as described, replace solenoid valve.



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Fig. 2: Checking Solenoid Valve Resistance & Operation
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Computer

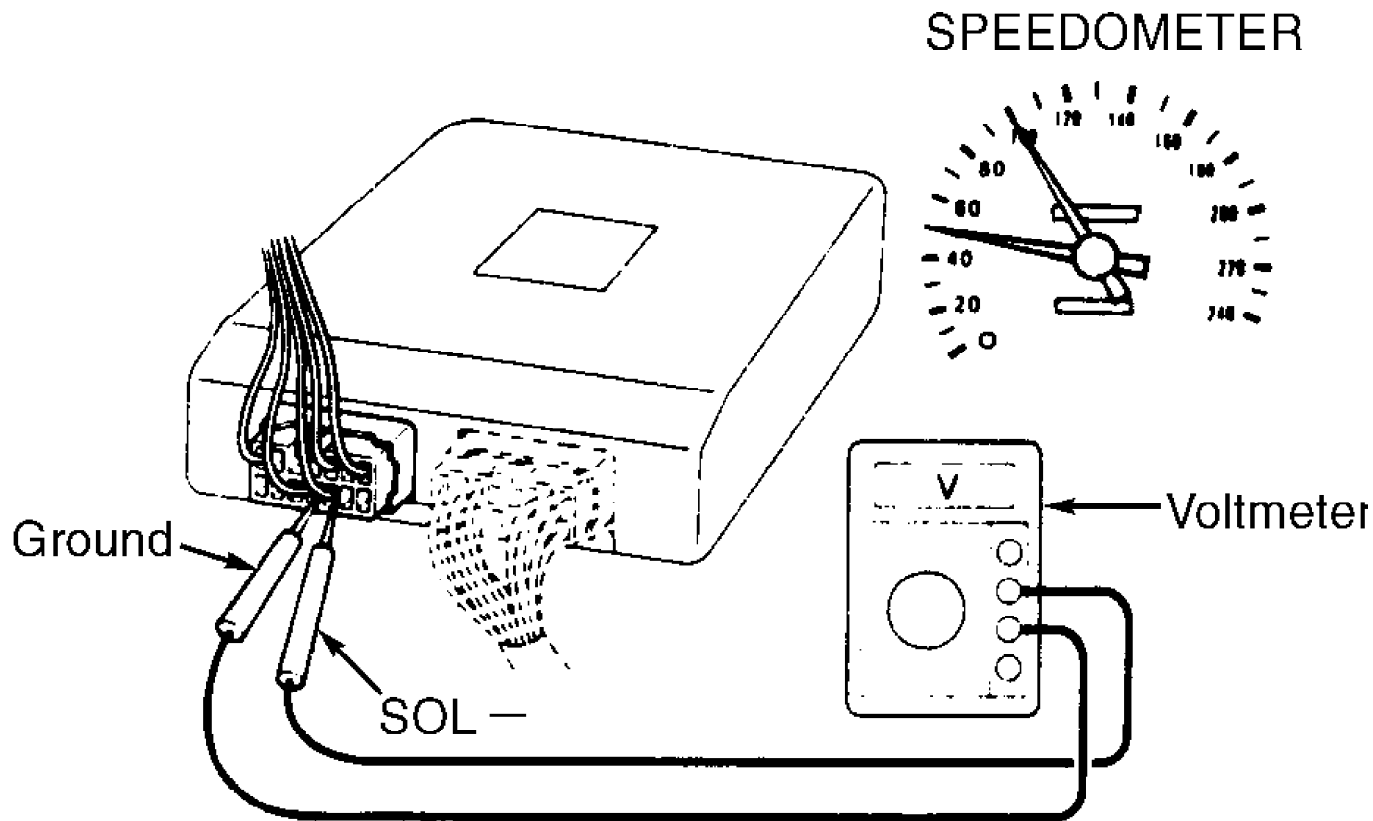
Raise and support vehicle. Remove glove box. DO NOT

disconnect computer connector. Start engine. Using a voltmeter, measure voltage between terminals GND and SOL (-) of computer connector. See COMPUTER VOLTAGE SPECIFICATIONS table. See Fig. 3. If voltage is not as specified, replace computer.

COMPUTER VOLTAGE SPECIFICATIONS TABLE

Test Between	Vehicle Speed MPH (KM/H)	Volts
SOL (-) & GND	(1) Zero15-.20
2JZ-GE	37 (60)06-.12
2JZ-GTE	37 (60)04-.09

(1) - Vehicle stopped, engine idling.



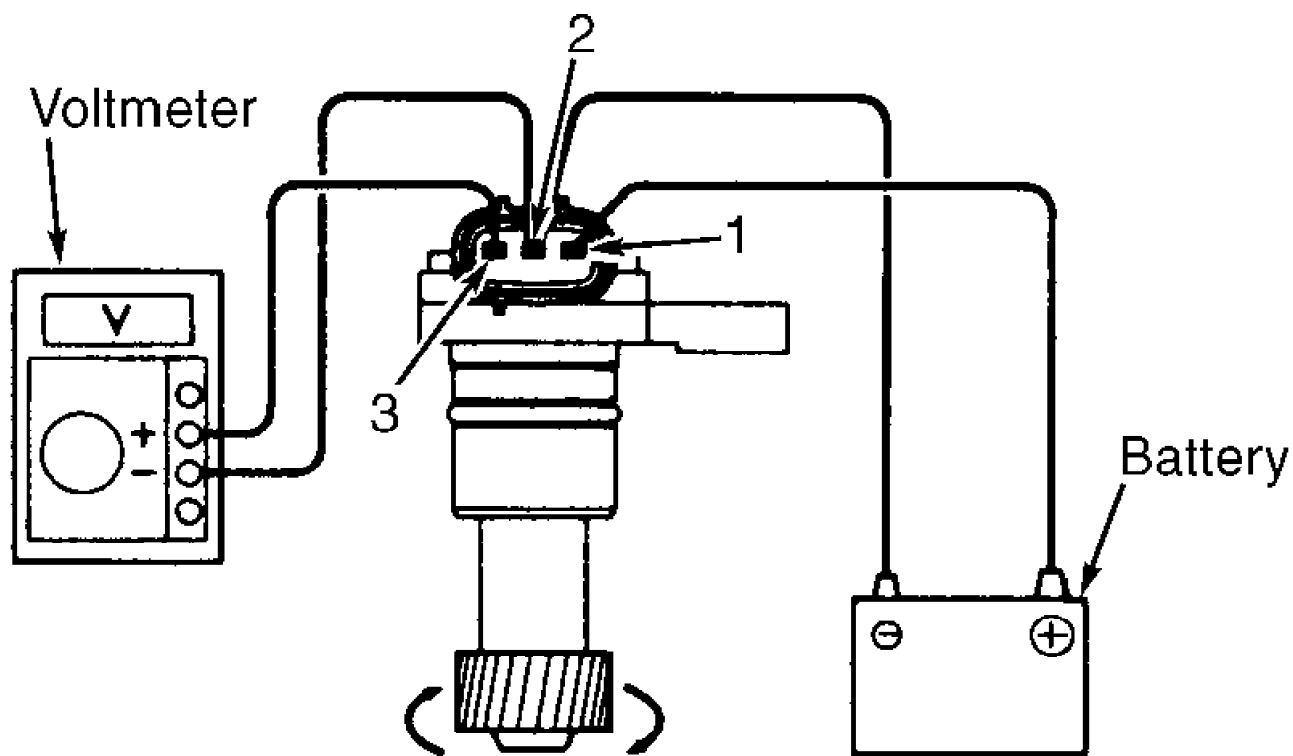
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Fig. 3: Testing Computer Voltage
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Speed Sensor

1) Disconnect speed sensor. Using jumper wires, connect battery positive lead to speed sensor terminal No. 1 and negative lead to terminal No. 2. See Fig. 4. Connect voltmeter positive lead to speed sensor terminal No. 3 and negative lead to terminal No. 2. Rotate speed sensor shaft.

2) Voltage should change from 0-11 volts between speed sensor terminals No. 2 and 3. Voltage should change 4 times for each complete revolution of the speed sensor shaft. If voltage is not as specified, replace speed sensor.



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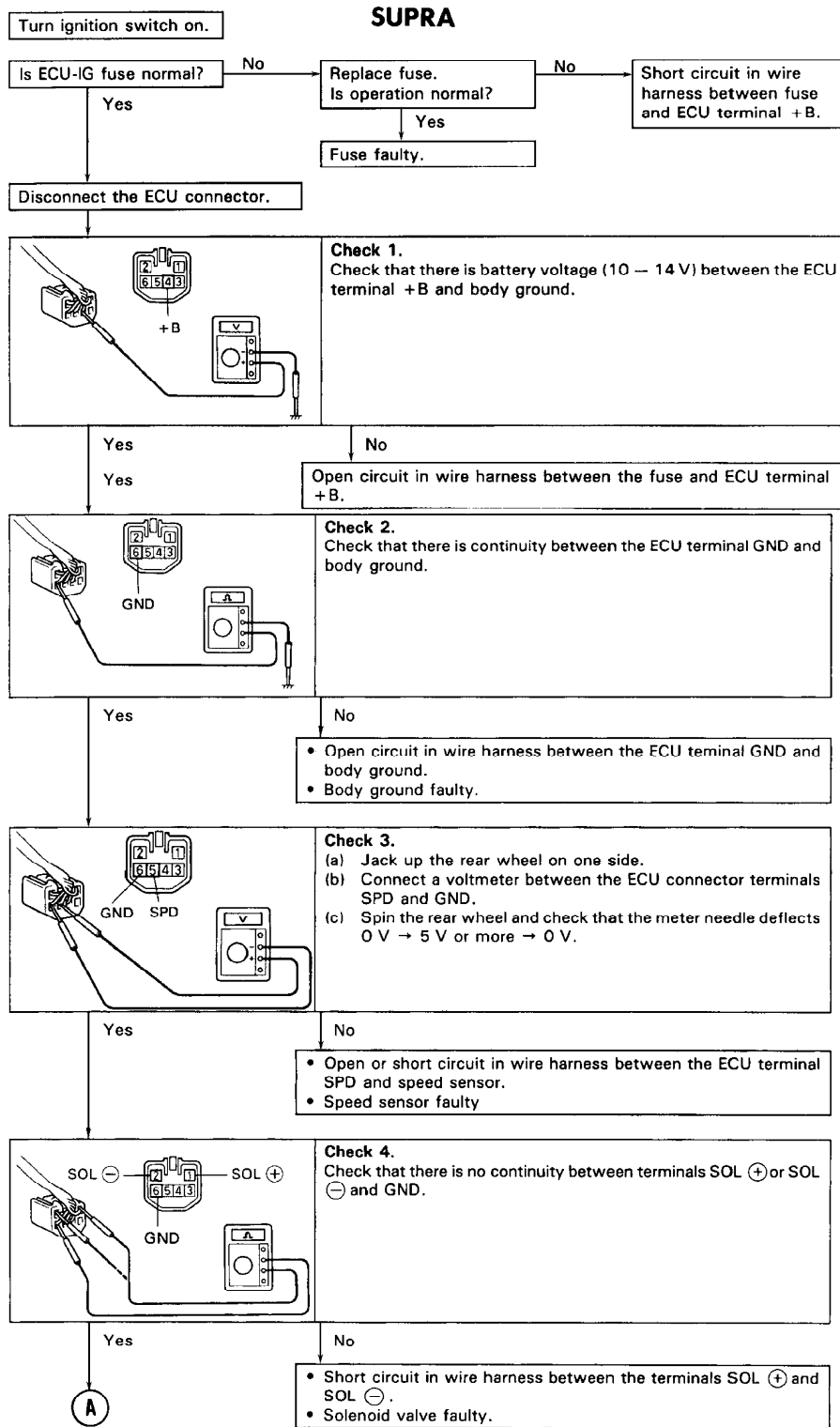
Fig. 4: Testing Speed Sensor
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

REMOVAL & INSTALLATION

For removal and installation procedures, see appropriate STEERING SYSTEM - POWER RACK & PINION article in STEERING section.

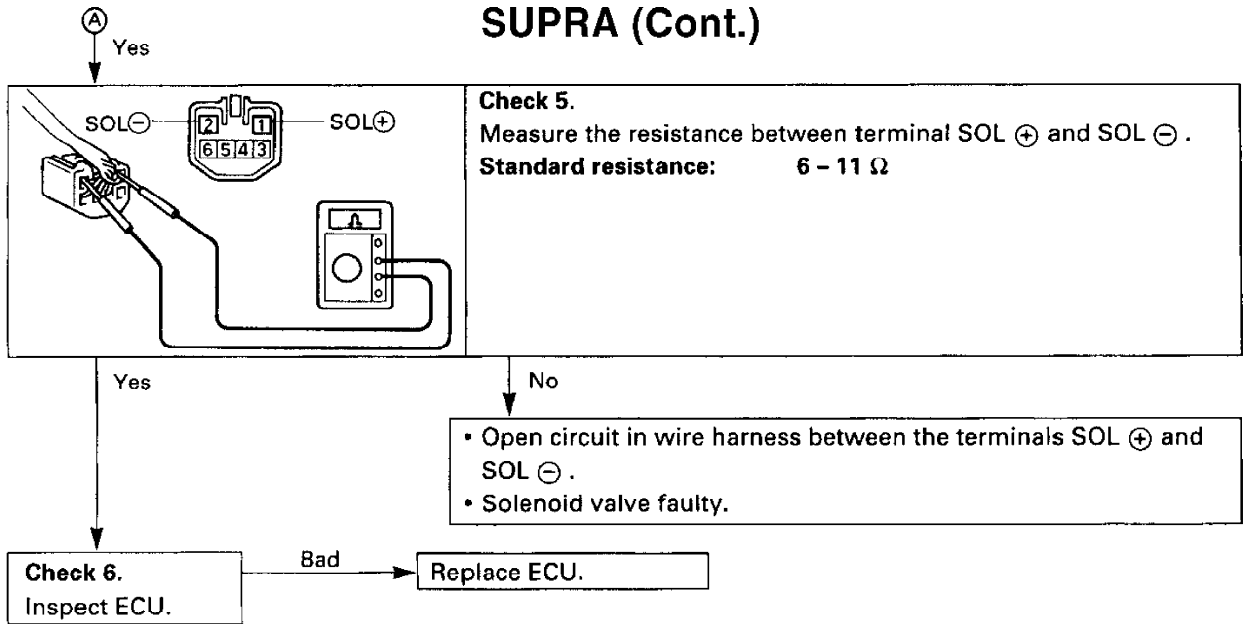
DIAGNOSTIC FLOW CHARTS

NOTE: Use appropriate flow chart to test and diagnose system function. See Fig. 5 or 6.



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 Fig. 5: Diagnostic Flow Chart (1 Of 2)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

SUPRA (Cont.)



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Fig. 6: Diagnostic Flow Chart (2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

WIRING DIAGRAMS

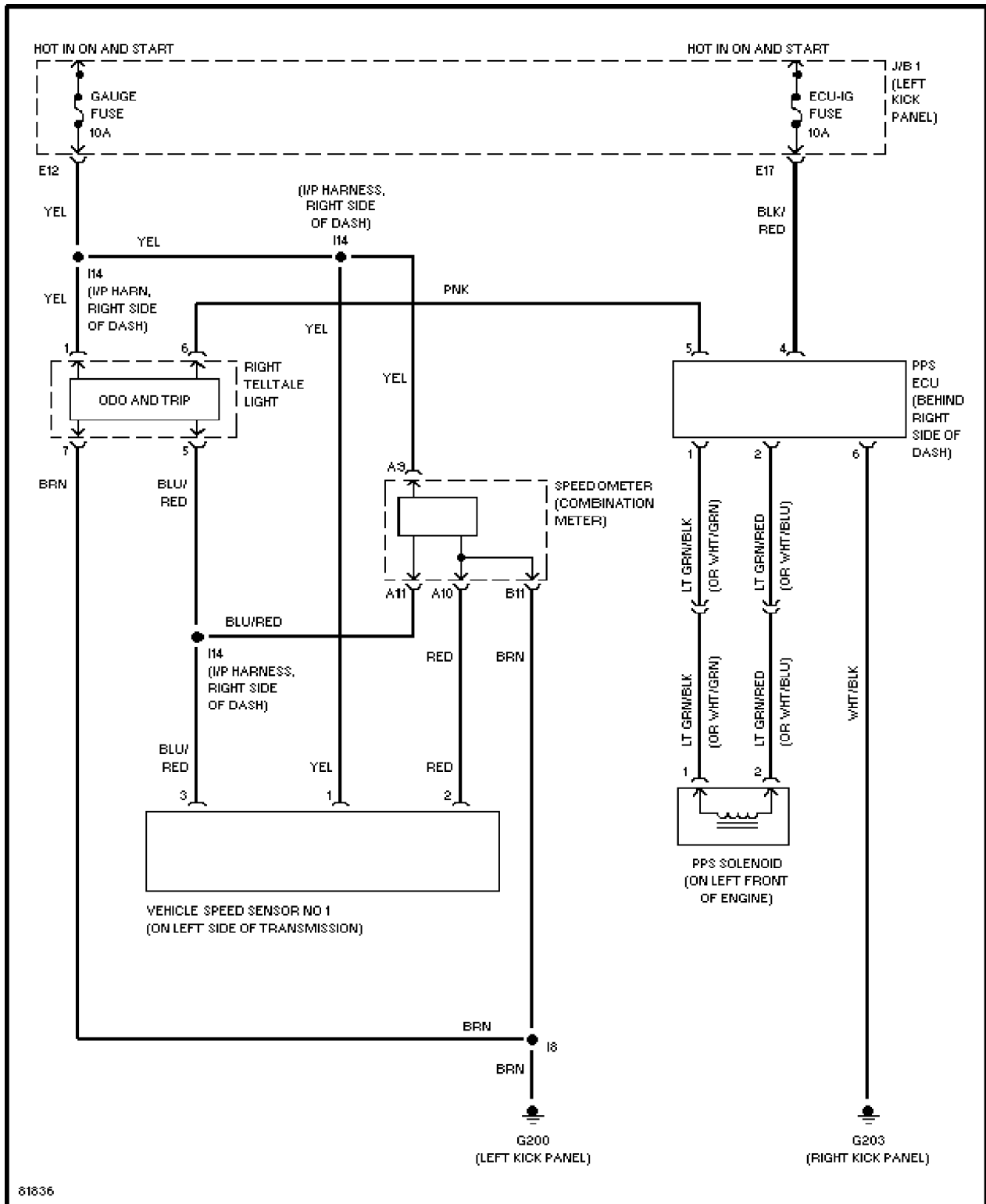


Fig. 7: Electronic Power Steering Wiring Diagram (Supra)