

## DIAGNOSIS AND TESTING (Continued)

If all the circuits check OK, perform the speed control servo assembly test and hang in a known good speed control amplifier. Do not substitute a good speed control amplifier until the speed control servo assembly test has been successfully completed.

### Simulated Road Test

**CAUTION:** When performing this simulated road test, the front wheels of the vehicle must be raised clear of the floor. Block the rear wheels securely and use only a suitable lifting device (such as a garage-type hoist) and support the front end with one jack stand on each side of the vehicle. Never attempt to use the vehicle bumper jack for tests of this type.

### Tools Required:

- Rotunda Speed Control 007-00013
- Rotunda Digital Volt-Ohmmeter (DVOM) 014-00407

1. Start the engine.
2. Shift the transmission gear selector to DRIVE.
3. Turn ON the speed control.

**CAUTION:** If any time during the following Steps the system should appear to go out of control and overspeed, be prepared to turn the system off at once with the OFF switch or the ignition switch.

4. Accelerate and hold at 56 km/h (35 mph).
5. Press and release the SET ACCEL button. Hold foot pressure very lightly on accelerator pedal. Normally the speed will continue at 56 km/h (35 mph) for a short period of time and then gradually start surging because the engine is not loaded.
6. Press the OFF button. The engine should drop back to idle. Stop the rear wheels with the brakes.
7. Press ON button, accelerate and hold the speed at 56 km/h (35 mph).
8. Press and hold the SET ACCEL button. Slowly remove the foot from the accelerator. The engine speed should gradually increase.
9. When the speed reaches 80 km/h (50 mph), release the SET ACCEL button. The vehicle should maintain 80 km/h (50 mph) for a short time before the surging begins.
10. Press the COAST button and hold. The engine should idle. Slow the front wheels to 56 km/h (35 mph).
11. Release the COAST button. Speed should maintain 56 km/h (35 mph). Surging should soon start.

12. Press and release the brake pedal. The system should shut off and the engine should slow to idle.
13. Accelerate engine and set the speed at 80 km/h (50 mph). Brake to 56 km/h (35 mph) and maintain 56 km/h (35 mph) with the accelerator. Depress and release the RESUME button. The speed should return to 80 km/h (50 mph).

When performing these tests, keep the vehicle speeds within reasonably low limits. If the system does not perform as normally expected, make note of the malfunction.

### Stoplamp Switch and Circuit Test

To be performed when brake application will not disconnect the speed control:

1. Check for stoplamp operation with a maximum brake pedal effort of 3 Kg (6 lb). If more than 3 Kg (6 lb) effort is required, check stoplamp fuse and lamps, check the brake actuation and stoplamp switch. Service or replace as required.
2. If stoplamps do not work, the stoplamp switch supply circuit fuse, or bulbs must be checked.
3. If stoplamps work properly check for battery voltage on Circuit 296 (P/O) at the 6-pin connector. Depress the brake pedal until the stoplamps are lit. Check voltage on the Circuit 511 (LG) lead on the 6-pin connector. The difference between the two voltage readings must not exceed 1.5 volts. If a voltage difference greater than 1.5 volts is found, the high resistance in the stoplamp circuit must be found and corrected. There should be no voltage present on the Circuit 511 (LG) lead with the brakelamps off.
4. Perform the speed control metering valve (9C727) test.

### Speed Control Metering Valve Test

The speed control metering valve releases the vacuum in the servo assembly whenever the brake pedal is depressed, and thus acts as a redundant safety feature. It should be checked whenever brake application does not disconnect the speed control.

Disconnect the vacuum hose (white stripe) from the speed control metering valve to the speed control servo. Connect a hand vacuum pump to the hose, and pump up a vacuum. If a vacuum can not be obtained, the hose or the dump valve leaks and should be replaced or adjusted. Step on the brake pedal. The vacuum should be released. If it is not, adjust or replace the speed control metering valve.