Testing Throttle Actuator

.

A. Testing Electrical Function of Throttle Actuator (Engine Turned off)

- 1. Pull off 2-pole plug (Figure 1, item 2) on throttle actuator.
- 2. Connect ohmmeter to terminals on throttle actuator.
- 3. The ohmmeter reading should be 10-22 ohms.
- 4. If this value is not obtained, replace throttle actuator.



 Fig. 1
 1
 Throttle Actuator
 3
 Vacuum Line

 2
 2-Pole plug
 4
 Vent Line

B. Checking Vacuum Supply for Throttle Actuator

- 1. Check vacuum line (3) and vent line (4, Figure 1) for correct and tight connection at the throttle actuator.
- 2. Check vacuum line (6, Figure 2) from the engine to the check valve (5) as well as vacuum line (3) from the check valve (5) to the throttle actuator for correct and tight connection.
- 3. Disconnect vacuum line (3, Figure 3) from throttle actuator (1) and connect to vacuum tester (a).
- 4. Run engine. The vacuum gauge must not drop to zero when accelerating briefly. If the gauge drops to zero, check vacuum system according to Workshop Manual, Vacuum Systems, Ventilation, Heating, Air Conditioning. In this case test check valve, vacuum reservoir and central locking system for leaks.



Fig. 2

- 3 Vacuum line to Throttle Actuator
- 5 Check Valve
- 6 Vacuum line from Engine



Fig. 3

a Vacuum Tester3 Vacuum line to ThrottleActuator

C. Mechanical and Vacuum Test of Throttle Actuator, Including Bowden Cable and Throttle Linkage

- 1. Remove engine air filter.
- 2. Check bowden cable (6, Figure 4) for correct adjustment at bell crank (7) and if necessary adjust as follows:
- 3. Check full load position of accelerator linkage with the accelerator pedal fully depressed (not kickdown position).
- 4. Disconnect vacuum line (3) from throttle actuator (1) and connect vacuum tester (a, Figure 5) directly to throttle actuator.
- 5. Disconnect 2-Pole plug (2) at throttle actuator (1), connect one terminal on the throttle actuator to battery + and the other to battery -. Perform the following test steps:



Fig. 4 7

6 Bowden cable adjusting nut Bell crank



Vacuum Tester а Throttle Actuator 3 Vacuum Line

Corrective Measures if Test Correct Operating Con-**Correct Operating Conditions** Steps ditions are not Obtained Check throttle linkage for 1 Create a vacuum with the vacuum tester and make sure that the free movement and correct throttle linkage and the bowden cable are not binding. The throttle if necessary. linkage must move uniformly. At a vacuum of approximately 300 mbar (8.86" Hg.) the throttle linkage must be in full load position. Check bowden cable for free A vacuum drop of 100 mbar (2.95" Hg.) per minute is permissible. movement. Replace throttle actuator. 2 Disconnect electrical leads from throttle actuator. The throttle link-Replace throttle actuator. age returns to idle position. A noticeable vacuum drop on the vacuum tester within one minute is not permissible. That means, the previously drawn vacuum must remain constant.